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NAS WHITING FIELD
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CONTAMINATION ASSESSMENT REPORT SITE 2891NAS WHITING FIELD FL
4/1/1994
ABB ENVIRONMENTAL

CONTAMINATION ASSESSMENT REPORT ADDENDUM

**SITE 2891
NAVAL AIR STATION WHITING FIELD
MILTON, FLORIDA**

Unit Identification Code (UIC): N60508

Contract No. N62467-89-D-0317

Prepared by:

**ABB Environmental Services, Inc.
2590 Executive Center Circle, East
Tallahassee, Florida 32301**

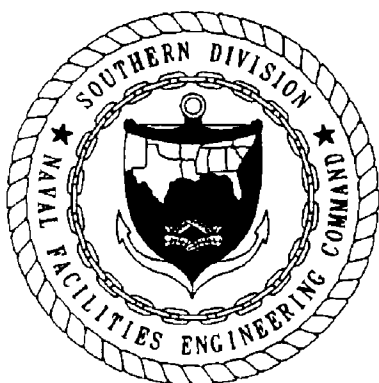
Author: Pamela J. Wagner

Prepared for:

**Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston, South Carolina 29411-0068**

Luis Vazquez, Code 1843, Engineer-in-Charge

April 1994



FOREWORD

Subtitle I of the Hazardous and Solid Waste Amendments (HSWA) of 1984 to the Solid Waste Disposal Act (SWDA) of 1965 established a national regulatory program for managing underground storage tanks (USTs) containing hazardous materials, especially petroleum products. Hazardous wastes stored in USTs were already regulated under the Resource Conservation and Recovery Act (RCRA) of 1976, which was also an amendment to SWDA. Subtitle I requires that the U.S. Environmental Protection Agency (USEPA) promulgate UST regulations. The program was designed to be administered by the individual States, who were allowed to develop more stringent standards, but not less stringent standards. Local governments were permitted to establish regulatory programs and standards that are more stringent, but not less stringent than either State or Federal regulations. The USEPA UST regulations are found in the Code of Federal Regulations, Title 40, Part 280 (Title 40 CFR 280) (*Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks*) and Title 40 CFR 281 (*Approval of State Underground Storage Tank Programs*). Title 40 CFR 280 was revised and published on September 23, 1988, and became effective December 22, 1988.

The Navy's UST program policy is to comply with all Federal, State, and local regulations pertaining to USTs. This report was prepared to satisfy the requirements of Chapter 17-770, Florida Administrative Code (FAC) (*State Underground Petroleum Environmental Response*) regulations on petroleum contamination in Florida's environment as a result of petroleum spills or leaking tanks or piping. Chapter 17-770 is administered by the Florida Department of Environmental Protection (FDEP).

Questions regarding this report should be addressed to the Environmental Coordinator, Naval Air Station (NAS) Whiting Field, Milton, Florida, at 904-623-7181, or to Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), Code 1843, at DSN 563-0613 or 803-743-0613.

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Milton, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AST	aboveground storage tank
bgl	below groundwater level
bls	below land surface
CA	contamination assessment
CAP	Contamination Assessment Plan
CAR	Contamination Assessment Report
CompQAP	Comprehensive Quality Assurance Plan
EPS	Environmental Protection Systems, Inc
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
MOP	Monitoring Only Proposal
NAS	Naval Air Station
NFAP	No Further Action Proposal
NFF	north fuel farm
NGVD	National Geodetic Vertical Datum
OVA	organic vapor analyzer
PCA	Preliminary Contamination Assessment
PCAR	Preliminary Contamination Assessment Report
ppb	part per billion
ppm	parts per million
SOUTHNAV- FACENGCOM	Southern Division, Naval Facilities Engineering Command
SPCC	Spill Prevention Control and Countermeasure
SPT	standard penetration test
TRPH	Total Recoverable Petroleum Hydrocarbons

1.0 SITE BACKGROUND

1.1 SITE DESCRIPTION. Site 2891 is one of two large-capacity aboveground storage tanks (ASTs) located at Naval Air Station (NAS) Whiting Field (Figure 1-1). ASTs 2891 and 2892 are 230,000-gallon, interior lined, steel tanks that were constructed in 1961. The tanks currently have secondary spill containment consisting of a concrete base and berm. The tanks contain jet fuel, JP-5, which is distributed to several locations at the base via pumps and associated piping. The piping is constructed of corrosion-resistant coated steel. The tanks are gauged daily and are registered in the base Spill Prevention Control and Countermeasure (SPCC) plan.

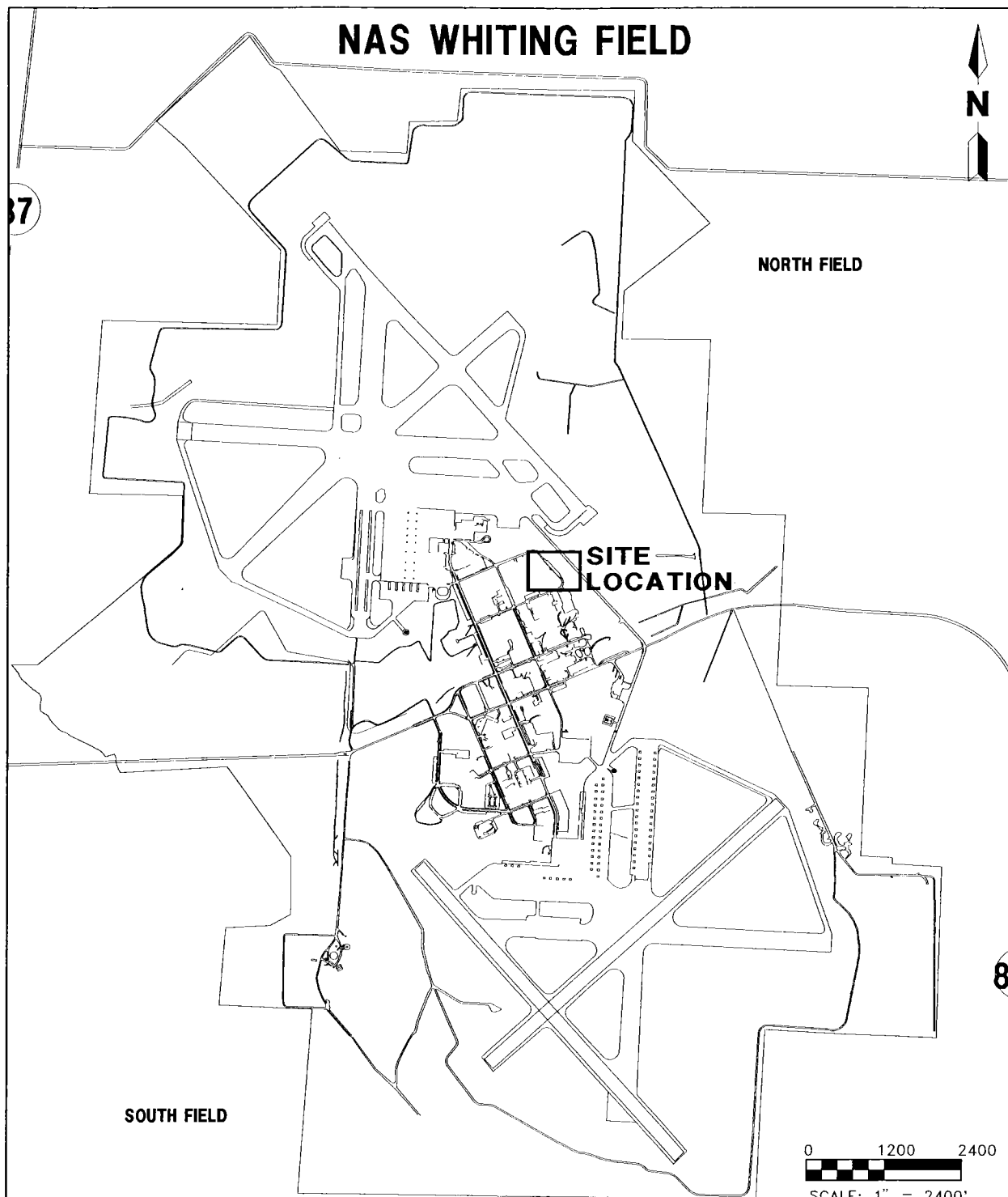
1.2 SITE HISTORY. On August 6, 1991, approximately 500 gallons of jet fuel overflowed from the top of AST 2891 (Figure 1-2). The released jet fuel was contained in the sand and clay containment area for AST 2891. Approximately 350 gallons were recovered. In the week following the release, the containment areas associated with AST 2891 and AST 2892 were excavated and replaced with a fuel-tight concrete liner. The excavated soil, 480 cubic yards, was sampled and analyzed according to Chapter 17-775, Florida Administrative Code (FAC), *Soil Thermal Treatment Facilities*. The soil was determined to be suitable for thermal treatment and taken to Industrial Waste, Inc., in Pensacola, Florida, for treatment and disposal.

Previous Site Investigations. A Preliminary Contamination Assessment (PCA) was performed in November 1991 and a Preliminary Contamination Assessment Report (PCAR) was prepared by Environmental Protection Systems, Inc (EPS). ABB-ES conducted a contamination assessment (CA) investigation at Site 2891 from January through August 1992, and a Contamination Assessment Report (CAR) was submitted January 1993. The EPS report was included as an appendix in the NAS Whiting Field Site 2891 CAR submitted by ABB Environmental Services, Inc. (ABB-ES), in January 1993. The findings of the CA conducted by ABB-ES are summarized below.

The assessment for Site 2891 was conducted concurrently with investigations at Site 2894 (the pump house associated with the ASTs) and Site 1467 (the north fuel farm [NFF]), which are both located in the vicinity of Site 2891. Soil boring and monitoring well data collected during the CAs associated with Sites 2894 and 1467 were also used for the Site 2891 CA.

Six soil borings, AST-SB-1, AST-SB-2, AST-SB-8, AST-SB9, AST-SB-12, and NFF-SB-54, were installed in the vicinity of Site 2891. Soil samples were collected and analyzed with an organic vapor analyzer (OVA) at 5-foot intervals to depths varying from 50 to 117 feet bls. Minimal concentrations of petroleum hydrocarbons (0 to 33 parts per million [ppm]) were detected in soil at the site by OVA headspace analysis (ABB-ES, 1993).

Nine monitoring wells were installed near Site 2894, seven (WHF-2894-1 through WHF-2894-6 and WHF-1467-13R) in the upper zone of the sand-and-gravel aquifer and two (WHF-2894-1D and WHF-2894-2D) in the lower zone of the sand-and-gravel aquifer. Groundwater samples from these wells were collected and analyzed for the kerosene analytical group parameters as defined in Chapter 17-770, FAC. Laboratory analytical results of samples from both the upper and lower water bearing zone indicated minimal petroleum hydrocarbon contamination in the ground-



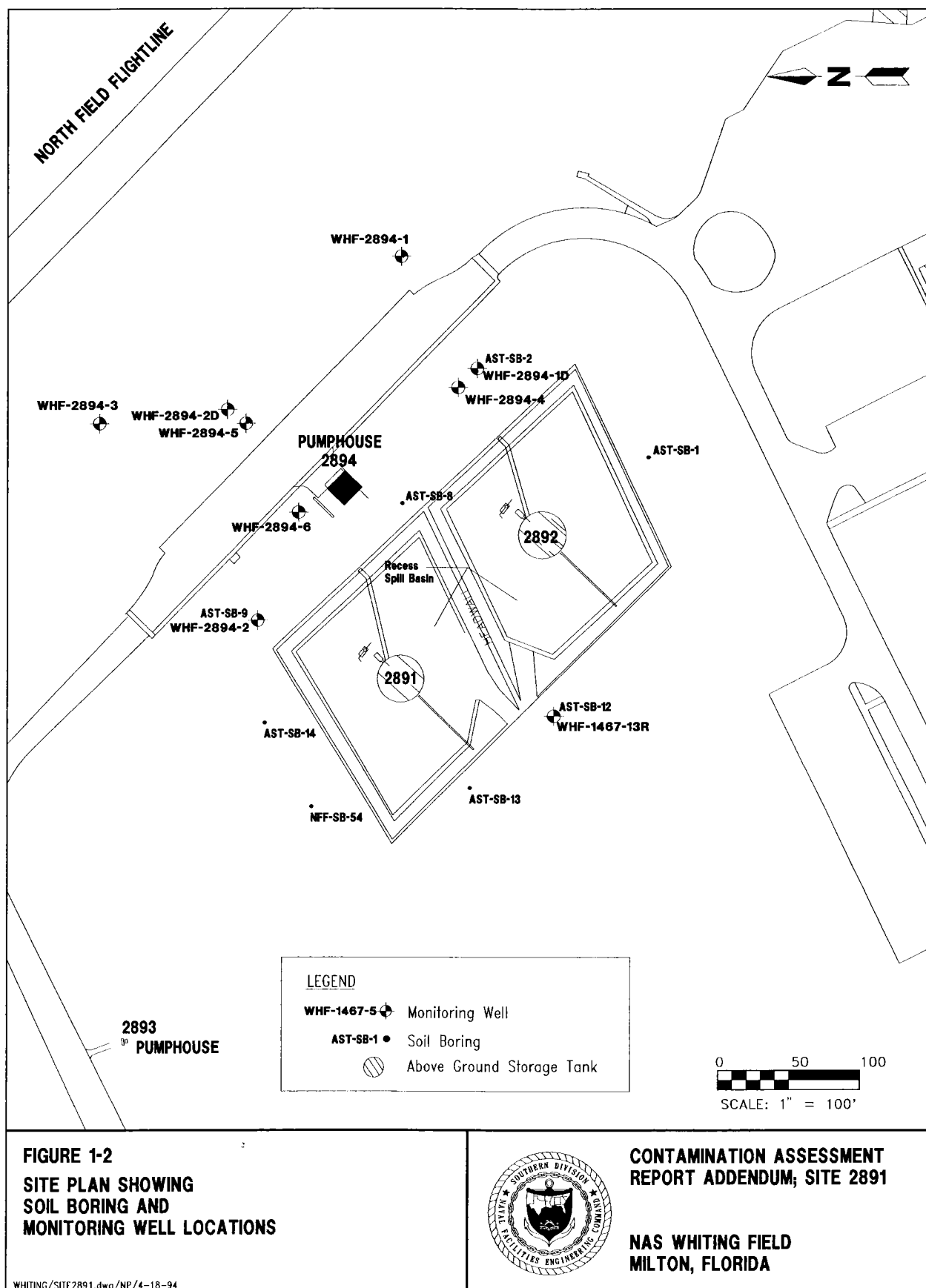
**FIGURE 1-1
SITE LOCATION MAP**

H:\WHITING\7518-51\FIG-2



**CONTAMINATION ASSESSMENT
REPORT ADDENDUM, SITE 2891**

**NAS WHITING FIELD
MILTON, FLORIDA**



water at the site. TRPH was detected in the sample collected from WHF-2894-MW1D at a concentration of 2 ppm. Ethylene dibromide was detected in the sample collected from WHF-2894-MW3 at a concentration of 0.09 part per billion (ppb). No other kerosene analytical group constituents were detected (ABB-ES, 1993).

Based on the proximity of Site 2891 to Site 1467, a Monitoring Only Plan (MOP) was recommended in the CAR (ABB-ES, 1993). In response to comments submitted by the Florida Department of Environmental Protection (FDEP) a supplemental investigation was conducted at the site. A copy of FDEP's comments for the Site 2891 CAR are attached as Appendix A, FDEP Correspondence.

1.3 SCOPE. The scope of services developed to perform the additional field work included:

- installation of two soil borings to a depth of approximately 82 feet below land surface (bls),
- collection of soil samples from the soil borings for OVA headspace analysis continuously to 20 feet bls and at 5-foot intervals thereafter,
- collection of groundwater samples from all site monitoring wells for analyses of kerosene analytical group parameters,
- reduction and analysis of all data gathered during the field investigation to prepare this CAR Addendum.

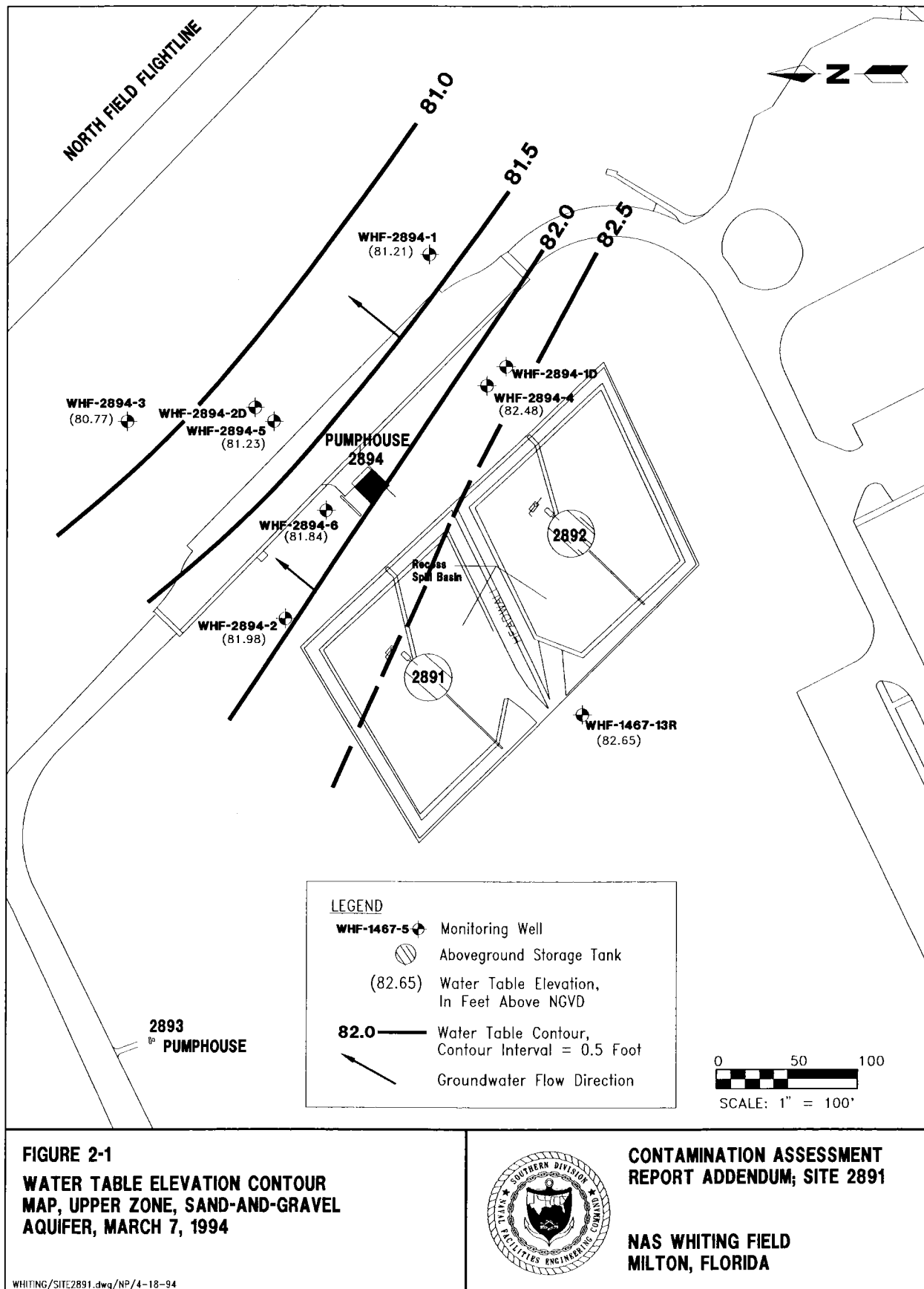
2.0 METHODOLOGIES AND EQUIPMENT

2.1 SOIL BORING PROGRAM. Two soil borings (AST-SB-13 and AST-SB-14) were advanced using a drill rig equipped with 3¼-inch inside diameter, hollow-stem augers to a depth of 60 feet. Soil samples from depths below 60 feet bls were obtained using mud rotary drilling techniques. Soil samples were collected from each borehole continuously to 20 feet, and at 5-foot intervals thereafter using a standard penetration test (SPT) split-spoon sampler. The soil samples were placed in 16-ounce glass jars and headspace analyses were performed using an OVA with a flame ionization detector (FID) as defined in Chapter 17-770.200(2), FAC. Complete lithologic logs for soil borings AST-SB-13 and AST-SB-14 are presented in Appendix B.

2.2 GROUNDWATER ELEVATION SURVEY. Depth to groundwater was measured in each well using an electronic water level indicator with an accuracy to 0.01 foot. Water level elevations were calculated by subtracting the measured depth to groundwater from the top of the well casing elevation. Groundwater level measurements were recorded on March 7, 1994, and the data presented on a water table elevation contour map (Figure 2-1). The groundwater flow direction shown on Figure 2-1 is east-northeast and corresponds well with the July 31, 1992, data presented on Figure 5-1 of the 1993 NAS Whiting Field Site 2891 CAR (Attachment B, Figure 5-1 [revised] in Appendix A, FDEP correspondence).

2.3 GROUNDWATER SAMPLING PROGRAM. Groundwater samples were collected in accordance with ABB-ES', FDEP-approved Comprehensive Quality Assurance Plan (CompQAP). The monitoring wells were purged with a Wattera™ pump before sample collection. Purging continued until a minimum of five well volumes of water had been removed. Groundwater samples were collected using an extruded Teflon™ bailer, placed into appropriate containers, properly preserved, and placed on ice. Samples were then shipped to ENSECO Wadsworth/ALERT Laboratories, Inc., Tampa, Florida, for analyses. All groundwater samples collected during the supplemental assessment were analyzed for the kerosene analytical group compounds outlined in Chapter 17-770, FAC.

Groundwater samples were collected from all site monitoring wells from March 7 through 11, 1994. One equipment blank, one duplicate, and two trip blanks were also collected and analyzed for kerosene analytical group parameters.



3.0 CONTAMINATION ASSESSMENT RESULTS

3.1 SOIL ASSESSMENT. Soil samples were collected at discrete depth intervals in soil borings AST-SB-13 and AST-SB-14 on March 11 and 12, 1994. Soil samples were analyzed using OVA headspace techniques. OVA readings in borings AST-SB-13 and AST-SB-14 varied from less than 1 to 2 ppm and were considerably less than the 10 ppm FDEP standard for "petroleum contaminated" soil. A summary of the OVA analytical data is presented in Table 3-1.

3.2 GROUNDWATER ASSESSMENT. Groundwater samples from both the upper and lower water bearing zones at Site 2891 were collected on March 7, 8, 9, and 10, 1994. Laboratory data sheets for groundwater samples from all site monitoring wells are presented in Appendix C. Laboratory analyses did not detect any kerosene analytical group constituents in the groundwater samples.

Table 3-1
Summary of Soil Sample Organic Vapor Analyzer (OVA)
Headspace Analytical Data,
March 11 and 12, 1994

Contamination Assessment Report Addendum
Site 2891, Naval Air Station Whiting Field
Milton, Florida

Depth (feet bls)	AST-SB-13	AST-SB-14
2	<1	<1
5 to 7	1	<1
7 to 9	<1	1
9 to 11	<1	1
11 to 13	<1	<1
13 to 15	<1	1
15 to 17	<1	2
17 to 19	<1	1
19 to 21	<1	2
25 to 27	<1	1
30 to 32	<1	2
35 to 37	<1	<1
40 to 42	<1	<1
45 to 47	2	1
50 to 52	<1	<1
55 to 57	1	<1
60 to 62	<1	<1
65 to 67	2	<1
70 to 72	2	1
75 to 77	<1	<1
80 to 82	<1	BGL

Notes: Concentrations are in parts per million (ppm).

bls = below land surface.

BGL = below groundwater level.

4.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

4.1 SUMMARY. The following is a summary of the findings of the supplemental field investigation conducted from March 7 through March 12, 1994, at Site 2891.

- OVA headspace analyses indicate no petroleum contamination in soil at the site.
- Laboratory analyses of samples from both the upper and lower water bearing zones indicate that no kerosene analytical group constituents were detected in the groundwater at Site 2891.

4.2 CONCLUSIONS. The level of volatile organic compounds detected in soil at Site 2891 was minimal and does not exceed State regulatory standards. No kerosene analytical group compounds were detected in Site 2891 groundwater samples.

4.3 RECOMMENDATIONS. Based on the findings and interpretations of this supplemental contamination assessment, a No Further Action Proposal (NFAP) is recommended for Site 2891 CAR.

5.0 PROFESSIONAL REVIEW CERTIFICATION

The contamination assessment contained in this report was prepared using sound hydrogeologic principles and judgment. This assessment is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the assessment described in this report. This Contamination Assessment Report Addendum was developed for Site 2891 at the NAS Whiting Field in Milton, Florida, and should not be construed to apply to any other site.

Michael J. Williams
Professional Geologist
P.G. No. 000344

Date

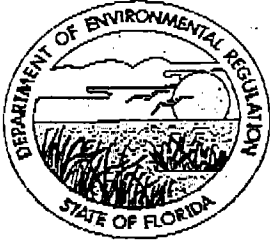
REFERENCES

ABB Environmental Services, Inc., 1993, Contamination Assessment Report, Site 2891, Naval Air Station, Whiting Field, Milton Florida: prepared for Southern Division, Naval Facilities Engineering Command, Charleston, South Carolina.

Florida Department of Environmental Regulation, May 1992, Guidelines for Assessment and Remediation of Petroleum Contaminated Soils, revised: Division of Waste Management, 39 p.

APPENDIX A

**FLORIDA DEPARTMENT OF ENVIRONMENTAL
PROTECTION (FDEP) CORRESPONDENCE**



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

March 29, 1993

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Luis Vazquez
Code 1843
Department of the Navy
Southern Division
Naval Facilities Engineering Command
Post Office Box 10068
Charleston, South Carolina 29411-0068

Dear Mr. Vazquez:

Department personnel have completed the technical review of the Contamination Assessment Report, Site 2891, NAS Whiting Field. I have enclosed a memorandum addressed to me from Mr. David M. Clowes. It documents our comments on the referenced report.

If I can be of any further assistance with this matter, please contact me at 904/488-0190.

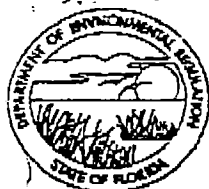
Sincerely,

Eric S. Nuzie
Eric S. Nuzie
Federal Facilities Coordinator

ESN/bb

Enclosure

cc: David Clowes
Robert Barr
Bill Kellenberger
Lynn Griffin
James Holland
John Mitchell
Allison Drew



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
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From: _____	Date: _____

Interoffice Memorandum

TO: Eric S. Nuzie, Federal Facilities Coordinator
Bureau of Waste Cleanup

THROUGH: James J. Crane, P.G. III/Administrator
Technical Review Section *JJC*

Tim J. Bahr, Professional Geologist II
Technical Review Section *B*

FROM: David M. Clowes, Environmental Specialist II
Technical Review Section *DME*

DATE: March 19, 1993

SUBJECT: Contamination Assessment Report (CAR) for Site 2891,
Naval Air Station Whiting Field, Milton, Florida.

I have reviewed the Contamination Assessment Report (CAR), dated January 1993 (received February 3, 1993), submitted for this site. In order to meet the requirements of Chapter 17-770, Florida Administrative Code (F.A.C.), the following comments need to be addressed:

1. To ascertain whether all excessively contaminated soil was excavated around tank 2891 and to avoid the need to drill through the concrete base and berm containment area to collect samples, additional soil boring samples are needed from locations as close as possible to the highest HNu reading of the PCAR. Specifically, two borings should be performed, one from both sides of the containment area, as close as possible to the pipelines and locations 2 and 14 of the PCAR. Soil samples for OVA analysis should be collected at five (5) foot intervals down to the water table, with representative samples that exceed 50 ppm on the OVA (if any) submitted for laboratory analysis (EPA Methods 8020, 8100 and 418.1).
2. Resampling of deep well WHF-2894-1D is needed to determine if the elevated total recoverable petroleum hydrocarbon (TRPH) level was genuine. Additionally, downgradient wells WHF-2894-2, WHF-2894-4 and WHF-2894-6 (as of Figure 4-1) should be resampled to determine if unexcavated excessively contaminated soil is leaching to the groundwater. Note,

MEMORANDUM

Eric S. Nuzie
March 19, 1993
Page Two

additional monitoring wells should be installed if significant contaminant concentrations are detected at perimeter monitoring wells, at either boring location, or at the vertical extent well.

3. Please submit a copy of the tank and line tightness tests performed in accordance with Chapter 17-761, F.A.C., to establish the structural integrity of the current product storage/distribution system.
4. Did the spill occur on August 6, 1991 as stated in the CAR or on August 19, 1991 as stated in the PCAR?
5. Figure 5-1 contains errors/conflicts with other diagrams, that need to be corrected. Wells WHF-2894-1, WHF-2894-4 and WHF-2894-13R are omitted, well WHF-2894-2 is documented to be in three different positions, and a new well WHF-2894-3R is included. Additionally, please recheck that the water table elevation contour lines are positioned to accurately represent the groundwater flow direction once all the wells are correctly positioned.
6. Please provide lithologic log documentation not included in the CAR for wells WHF-2894-1, WHF-2894-2, WHF-2894-3, and WHF-2894-4. Include pertinent information such as depths to water table and screened intervals.
7. A MOP or NFAP should be submitted if the resampling indicates that "monitoring only" or "no further action" are appropriate, otherwise a Remedial Action Plan (RAP) will be required following DER approval of the necessary supplemental assessment.



ABB
ASEA BROWN BOVERI

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FAXED
2/10/93

10 May, 1993

Commanding Officer
Mr. Luis Vazquez, Code 1843
SOUTHNAVFACENGCOM
P.O. Box 190010
North Charleston, SC 29419-9010

SUBJECT: Response to FDER Comments
Contamination Assessment Report
Sites 2891 and 2866
NAS Whiting Field
Contract No. N62467-89-D-0317, CTO 009

ENCLOSURE: Response to FDER Comments of March 29, 1993

Dear Luis;

This letter addresses comments from the Florida Department of Environmental Regulation (FDER) concerning the subject CARS and transmits ABB-ES recommended responses to those comments.

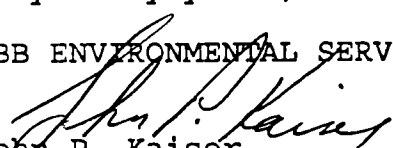
With regard to site 2866, Response (1) will delay over-all site completion until after the tank removal. Response (2) would put the site in the same situation as sites 1466 and 1467, in which case the IR program may take precedence over tank removal results.

With regard to site 2891, our Response (1) does not recommend TRPH analysis of samples taken every five feet since FDER rules and guidelines do not require it. Additionally, it would be hard to estimate and could be very expensive.

Please review these responses to FDER's comments for appropriateness and provide us with any comments. If you have any questions please call me or Jim Williams.

Very truly yours,

ABB ENVIRONMENTAL SERVICES, INC.


John P. Kaiser
Senior Project Manager

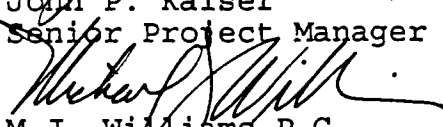

M.J. Williams P.G.
Principal Scientist

ABB Environmental Services, Inc.

**Response to FDER Comments
Site 2891
Naval Air Station Whiting Field
Milton, Florida
Contract No. N62467-89-D-0317, CTO No. 009.**

COMMENT 1.

"To ascertain whether all excessively contaminated soil was excavated around tank 2891 and to avoid the need to drill through the concrete base and berm containment area to collect samples, additional soil boring samples are needed from locations as close as possible to the highest HNu reading of the PCAR. Specifically, two borings should be performed, one from both sides of the containment area, as close as possible to the pipelines and location 2 and 14 of the PCAR. Soil samples for OVA analysis should be collected at five (5) foot intervals down to the water table, with representative samples that exceed 50 ppm on the OVA (if any) submitted for laboratory analysis (EPA Methods 8020, 8100 and 418.1)."

RESPONSE 1.

Two additional soil borings as close as possible to locations No. 2 and No. 14 shown in the PCAR are planned. Soil samples will be collected at 5-foot intervals to the water table and screened using an OVA with a flame ionization detector (FID) in accordance with Chapter 17-770.200(2) F.A.C. to determine if the soil is considered "excessively contaminated" (> 50 ppm) for the Kerosene group.

With regard to the to the above-stated condition that "Soil samples for OVA analysis should be collected at five (5) foot intervals down to the water table, with representative samples that exceed 50 ppm on the OVA (if any) submitted for laboratory analysis (EPA Methods 8020, 8100, and 418.1).", it is not understood why FDER is now requesting these laboratory analyses for soil samples. FDER's May 1992, "Guidelines for Assessment and Remediation of Petroleum Contaminated Soils" state:

"A five percent duplicate sampling (5% of the number of OVA readings) by either EPA Method 5030/8020 or EPA Method 9073 (see Appendix B) may be conducted to verify that petroleum contamination is present. Unless required for compliance with a disposal permit requirement, no other laboratory soil analyses are necessary."

Although it is not anticipated that there will be a need to obtain a disposal permit, if conditions should arise that would require a disposal permit, laboratory soil analyses will be performed as recommended in the guidelines.

With regard to the agreement reached between FDER, SouthDIV, and ABB-ES at the meeting held March 30, 1993, concerning the additional soil borings to be drilled at Site 2894, it was decided that the borings proposed for Site 2894 would be terminated after drilling to an approximate depth of 50 feet below land surface (bls) if two or more consecutive OVA soil headspace readings were less than 10 ppm. In consideration of the fact that the release of JP-5 from aboveground storage tank 2891 occurred recently, within the past two years; the release was contained in a relatively small and bermed area; initial remedial action was implemented within 24 hours; and, OVA headspace readings of soil from borings in the immediate vicinity of the proposed soil boring locations measured less than 10 ppm; it is requested that the proposed additional soil borings be terminated after a minimum depth of 50 feet bls if two consecutive samples have OVA headspace readings of less than 10 ppm.

COMMENT 2.

"Resampling of deep well WHF-2894-1D is needed to determine if the elevated total recoverable petroleum hydrocarbon (TRPH) level was genuine. Additionally, downgradient wells WHF-2894-2, WHF-2894-4 and WHF-2894-6 (as of Figure 4-1) should be resampled to determine if unexcavated excessively contaminated soil is leaching to the groundwater. Note, additional monitoring wells should be installed if significant contaminant concentrations are detected at perimeter monitoring wells, at either boring location, or at the vertical extent well."

RESPONSE 2.

Laboratory Quality Control data and ABB-ES data validation results indicate that there is no evidence to call into question the integrity, authenticity, or "genuineness" of the groundwater sample analytical results for monitoring well WHF-2894-1D. Strict Quality Assurance/Quality Control sampling protocol, in accordance with ABB-ES's FDER approved Comprehensive Quality Assurance Plan, was followed during all groundwater and soil sampling at NAS Whiting Field. All approved monitoring well installation, development and groundwater sampling procedures and regulations were followed. The groundwater samples from WHF-2894-1D were sent to a State certified laboratory for analysis following applicable chain-of-custody control. For these reasons, it is felt that FDER's request to resample monitoring well WHF-2894-1D "...to determine if the elevated total recoverable petroleum hydrocarbon (TRPH) level was genuine.", as stated in the first sentence of Comment 2., is not appropriate. However, additional field investigation at Sites 2891 and 2894 is planned, and all monitoring wells associated with these sites, including wells WHF-2894-2, WHF-2894-4 and WHF-2894-6, will be sampled for analysis of Kerosene group contaminants at that time to obtain current analytical results.

It is not clearly understood what concentrations of which contaminants constitute the "...significant contaminant concentrations..." referred to in the last sentence of Comment 2. FDER's October 1990, "No Further Action and Monitoring Only Guidelines for Petroleum Contaminated Sites" cite specific contaminants and concentrations to be used as guidance for making the appropriate recommendation for sites regulated under Chapter 17-770 F.A.C. It is the understanding of the Navy and ABB-ES that the referenced guidelines are to be used in conjunction with FDER's October 1989, "Guidelines for the Preparation of Contamination Assessment Reports for Petroleum Contaminated Sites" when assessing the degree and extent of groundwater contamination so that the recommendations presented in the CAR are based on accepted standards, and not made on an arbitrary basis. Unless FDER indicates otherwise, it will be assumed that all recommendations for disposition of Site 2891 will be made in accordance with the referenced FDER guidelines and target cleanup levels contained in Chapter 17-770.730(5)(a)2 F.A.C.

COMMENT 3.

"Please submit a copy of the tank and line tightness tests performed in accordance with Chapter 17-761, F.A.C., to establish the structural integrity of the current product storage/distribution system."

RESPONSE 3.

Per the recent Alternate Procedures Agreement between FDER and the Navy, Storage Tank 2891 is classified as a Bulk Storage tank and, as such, falls under 17-762 regulations, not 17-761. The associated piping is bulk product piping and is subject to annual tightness testing under this rule. As of this date, no prior testing has been conducted for Storage Tank 2891 and the associated pipelines. Naval Air Station Whiting Field plans to begin performing tightness tests on Storage Tank 2891 and its associated pipelines at least once a year and more if situations arise that require it. The first test is under contract to be performed this year.

COMMENT 4.

"Did the spill occur on August 6, 1991, as stated in the CAR or on August 19, 1991, as stated in the PCAR?"

RESPONSE 4.

The date of the spill at Site 2891 reported in the PCAR prepared by Environmental Protection Systems, Inc. (EPS) was Wednesday, August 13, (1991). EPS performed their initial site visit on August 19, 1991. During preparation of the CAR, ABB-ES telephoned Mr. James Holland (Environmental Coordinator, Public Works Dept.) who stated that, to the best of his knowledge, excavation of the containment area began the week of August 10, 1991, shortly after the spill had occurred. On the basis of this information, ABB-ES estimated the date of August 6, 1991, as the approximate date of the spill. ABB-ES has since contacted EPS to confirm the spill date. Mr. Geoffery Maddux, P.G., of EPS informed ABB-ES that the August 13, 1991, spill date reported in the PCAR was taken from the Statement of Work sent to EPS from the Navy for the site assessment at Site 2891. Therefore, based on the Navy's Statement of Work, the spill occurred August 13, 1991. A copy of the Navy's Statement of Work for the services contracted to EPS is enclosed as Attachment A.

COMMENT 5.

"Figure 5-1 contains errors/conflicts with other diagrams, that need to be corrected. Wells WHF-2894-1, WHF-2894-4 and WHF-2894-13R are omitted, well WHF-2894-2 is documented to be in three different positions, and a new well WHF-2894-3R is included. Additionally, please recheck that the water table elevation contour lines are positioned to accurately represent the groundwater flow direction once all the wells are correctly positioned."

RESPONSE 5.

Wells WHF-2894-1 and WHF-2894-4 were both incorrectly designated WHF-2894-2 in Figure 5-1. In the same figure, well WHF-1467-13R was incorrectly identified as WHF-1467-3R. Groundwater elevations associated with the mislabeled wells were also incorrect and slightly affect the groundwater flow direction. Figure 5-1 has been revised to show the correct well designations, groundwater elevations, and flow direction. Figure 5-1 (Revised) is enclosed as Attachment B.

COMMENT 6.

"Please provide lithologic log documentation not included in the CAR for wells WHF-2894-1, WHF-2894-2, WHF-2894-3, and WHF-2894-4. Include pertinent information such as depths to water table and screened intervals."

RESPONSE 6.

The lithologic logs for wells WHF-2894-1, WHF-2894-2, WHF-2894-3, and WHF-2894-4 were not included in the Site 2891 CAR because these wells were installed to assess contamination at Site 2894. As requested, the lithologic logs are provided in Attachment C.

COMMENT 7.

"A MOP or NFAP should be submitted if the resampling indicates that 'monitoring only' or 'no further action' are appropriate, otherwise a Remedial Action Plan (RAP) will be required following DER approval of the necessary supplemental assessment."

RESPONSE 7.

Based on results of proposed additional field work a MOP, NFAP, or RAP, as appropriate, will be recommended for this site.

ATTACHMENT A

**NAVY STATEMENT OF WORK FOR SERVICES CONTRACTED TO ENVIRONMENTAL PROTECTION
SYSTEMS, INC.**

PROJECT SCOPE

Background: On Wednesday, August 13th, approximately 500 gallons of JP-5 jet fuel was released from tank #2891. The release occurred as fuel was being pumped into the tank and was a result of overfilling of the tank. The fuel discharged into the containment area approximately as outlined on the attached sketch. The containment area bottom is sand/clay. Initial remediation efforts resulted in total containment of the fuel within the containment area and the recovery of approximately 350 gallons of product. A project is currently in progress to remove all excessively contaminated soil.

Requirement:

1. The contractor shall perform 30 sub-surface investigative samples at storage tank # 2891 to define petroleum concentrations of 50 ppm or less. Samples shall be taken approximately as shown on the attached sketch.
2. Five confirming samples shall be analyzed within a laboratory to confirm results from the above field analysis.
3. A final report confirming findings and recommendations shall be provided.
4. Analytical methods must satisfy the requirements of the Florida Department of Environmental Regulation pursuant to regulation 17-770, "Petroleum Contamination Site Cleanup Criteria".
5. The contractor shall respond within one day of notification.

ATTACHMENT B

FIGURE 5-1 (REVISED)

DATE: 11-13-92

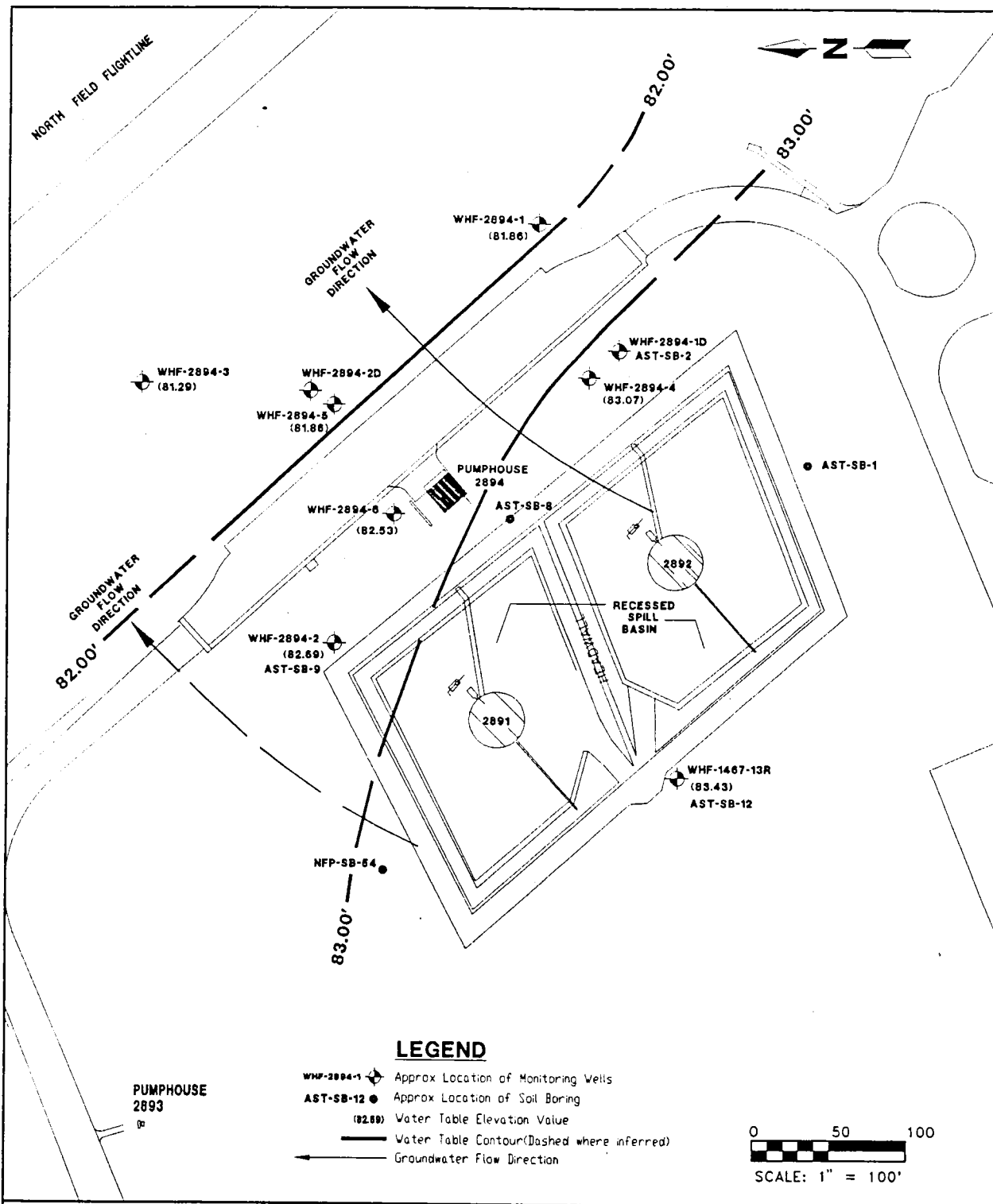


FIGURE 5-1
WATER TABLE ELEVATION CONTOUR MAP,
UPPER ZONE, SAND-AND-GRAVEL AQUIFER
JULY 31, 1992



CONTAMINATION ASSESSMENT
REPORT, SITE 2891

NAS WHITING FIELD
MILTON, FLORIDA

ATTACHMENT C

**LITHOLOGIC LOGS FOR MONITORING WELLS
WHF-2894-1, WHF-2894-2, WHF-2894-3, AND WHF-2894-4**

TITLE: NAS Whiting Field				LOG of WELL: WHF-2894-1		BORING NO. AST-SB-5	
CLIENT: SOUTHNAVFACENGCOM				PROJECT NO: 7518-40			
CONTRACTOR: Groundwater Protection				DATE STARTED: 4/08/92		COMPLTD: 4/08/92	
METHOD: HSA		CASE SIZE: 4" ID		SCREEN INT.: 80-90'		PROTECTION LEVEL: D	
TOC ELEV.: FT.		MONITOR INST.: OVA		TOT DPTH: 98FT.		DPTH TO ∇ 85 FT.	
LOGGED BY: N. Pagano		WELL DEVELOPMENT DATE:				SITE: 2894	

DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
5		2.0/2	0.0	SAND: Brown-green to gray, fine to medium grained, trace clay.	SM	POSTHOLE	
10		2.0/2	0.0	CLAYEY SAND: Red-brown to tan to buff, fine to medium grained.	SC		
15		1.0/2	0.0	CLAYEY SAND: Tan to brown to buff, fine to medium grained.			
20		1.2/2	0.0	SAND: Pink to white to yellow, fine to medium grained.	SM		
25		2.0/2	0.0	SAND: White to pink to gold to buff, fine to medium grained.			
30		1.7/2	0.0	SAND: Pale yellow to buff to white, fine to medium grained.			
35		1.3/2	0.0	SAND: Buff to white, fine to medium grained, trace silt.			
40		1.5/2	0.0	SAND: Buff to tan to gray, fine to medium grained, trace clay.			
45		1.5/2	0.0	SAND: Buff to tan to gray, fine to medium grained.			
50		1.5/2	0.0				
55							

TITLE: NAS Whiting Field		LOG of WELL: WHF-2894-1	BORING NO. AST-SB-5
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7518-40
CONTRACTOR: Groundwater Protection		DATE STARTED: 4/08/92	COMPLTD: 4/08/92
METHOD: HSA	CASE SIZE: 4" ID	SCREEN INT.: 80-90'	PROTECTION LEVEL: 0
TOC ELEV.: FT.	MONITOR INST.: OVA	TOT DPTH: 98FT.	DPTH TO ∇ 85 FT.
LOGGED BY: N. Pagano	WELL DEVELOPMENT DATE:		SITE: 2894

DEPTH F.T.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
Continued from PAGE 1								
80		1.7/2	0.0	SAND: Buff to tan to gray, fine to medium grained.		SM		
		1.6/2	0.0	SAND: White to tan, fine to medium grained, some gravels.				
65		1.5/2	0.0					
70		1.5/2	0.0	SAND: White, fine to medium grained.				
75		1.8/2	0.0	SAND: Buff to tan to white, fine to coarse grained, trace clay.		GM		
80		1.1/2	1.0	SAND: Pink to pale yellow to white, fine grained.		ML		
85		1.1/2	N.M.	SAND: Pink-red to yellow to buff to tan, fine to coarse grained, wet.		GM		
90		2.0/2	0.0	SANDY CLAY: Buff to light brown to yellow, fine to medium grained, moderate clay.		CL		
95		2.0/2	0.0	CLAY: Pink to yellow to brown to white, fine to medium grained, stiff.		CH		
100		2.0/2	0.0					
105		N/A	N.M.	SANDY CLAY: Brown to gold to white to buff, fine to medium grained, moderate clay.		CL		
110						GM		

TITLE: NAS Whiting Field		LOG of WELL: WHF-2894-2	BORING NO. AST-SB-9
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7518-40	
CONTRACTOR: Groundwater Protection		DATE STARTED: 4/09/92	COMPLTD: 4/09/92
METHOD: HSA	CASE SIZE: 4" ID	SCREEN INT.: 70-85'	PROTECTION LEVEL: D
TOC ELEV.: FT.	MONITOR INST.: OVA	TOT DPTH: 88FT.	DPTH TO ∇ 81 FT.
LOGGED BY: N. Pagano	WELL DEVELOPMENT DATE:		SITE: 2894

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
5			2/2	0.0	CLAYEY SAND: Brown, fine grained, well-sorted, moist.		SC	POSTHOLE	
10			2/2	1.0				2,2,2,8	
15			2/2	1.0	SANDY CLAY: Red to tan to gray.		CL	8,9,9,9	
20			2/2	2.0	CLAY: Gray to tan, stiff.			8,9,9,10	
25			2/2	2.0	SILTY CLAY: Pink to brown, moist.			8,7,7,8	
30			2/2	2.0	SANDY CLAY: Tan to red, very fine grained, moist, odor detected.			8,8,7,8	
35			2/2	2.0	SAND: White to red, very fine to coarse grained.		GM	8,15,21,22	
40			2/2	1.0	SILTY CLAY: Purple-gray, moist.		CL	11,11,9,10	
45			2/2	1.0	SAND: White, medium grained.		SM	0,0,7,14	
50			2/2	0.0	SILTY SAND: White, very fine grained, trace clay, moist.		ML	10,12,14,14	
55					SAND: White, fine to medium grained, well-graded.		SM	14,19,25,23	
							SW		

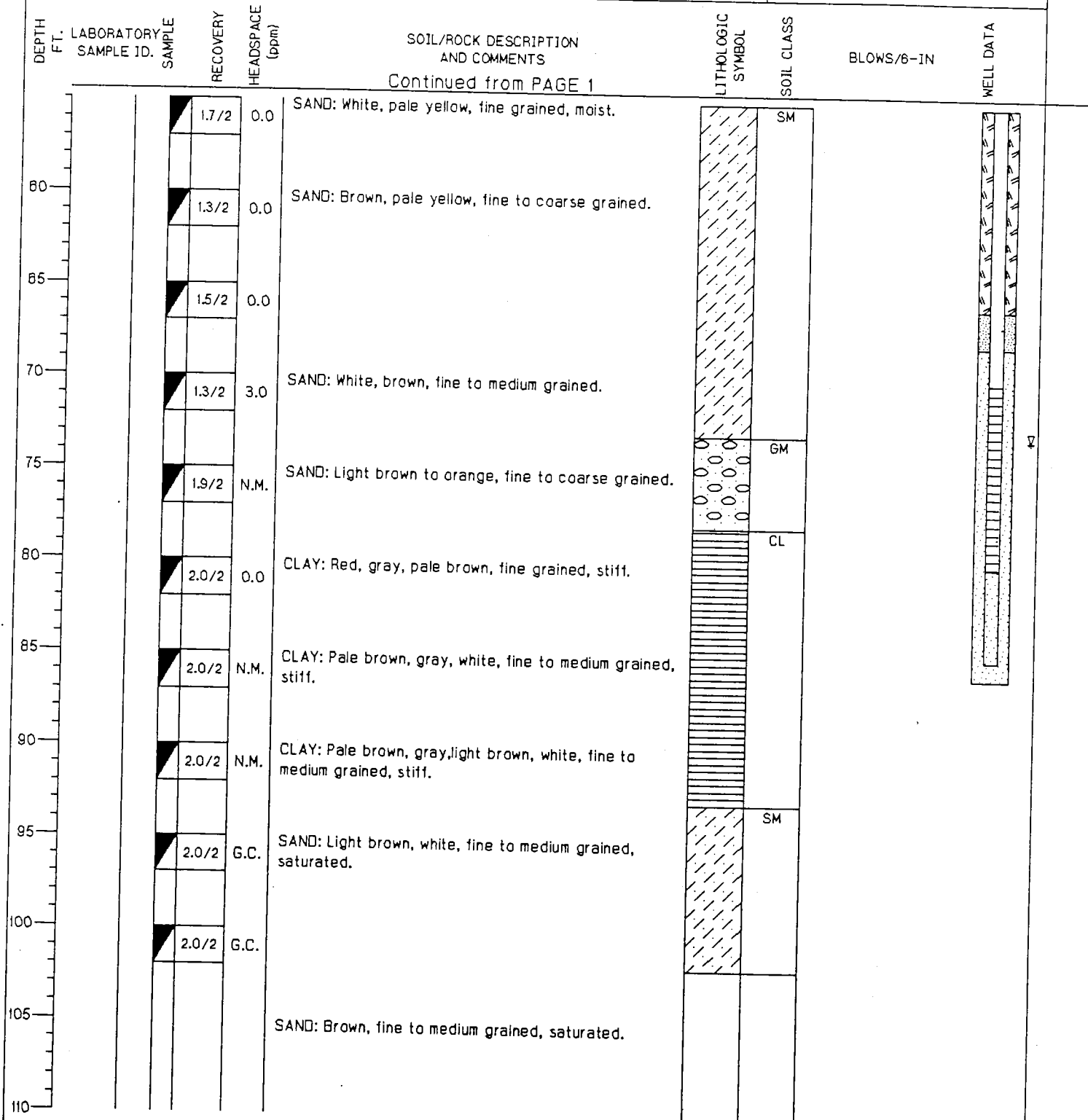
TITLE: NAS Whiting Field		LOG of WELL: WHF-2894-2	BORING NO. AST-SB-9
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7518-40	
CONTRACTOR: Groundwater Protection		DATE STARTED: 4/09/92	COMPLTD: 4/09/92
METHOD: HSA	CASE SIZE: 4" ID	SCREEN INT.: 70-85'	PROTECTION LEVEL: 0
TOC ELEV.: FT.	MONITOR INST.: OVA	TOT DPTH: 88FT.	DPTH TO ∇ 81 FT.
LOGGED BY: N. Pagano	WELL DEVELOPMENT DATE:		SITE: 2894

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
Continued from PAGE 1								
80		2/2	1.0	SAND: White, fine to coarse grained, well-graded.		SW	18,20,23,23	
		1.5/2	0.0				0,0,12,12	
85		1.8/2	0.0				10,12,12,12	
70		1.5/2	0.0	SAND: White to gold, fine to coarse grained.			22,22,24,29	
75		1.2/2	0.0	SAND: White to red, medium to coarse grained. CLAYEY SAND: Red to white, medium grained.		SC	28,33,33,35	
80		1.2/2	1.0	SAND: Red to tan, medium to very coarse grained.		GP	10,12,14,14	
85		1.5/2	0.0	CLAYEY SAND: Brown, moist. CLAY: Gray, trace sand.		SC	Wt. of Rod	
90		1.8/2	0.0	CLAY: Gray to red, trace silt.		CH	7,12,14,15	
95		1.8/2	8.0	CLAY: Purple to gray, stiff.			8,10,12,12	
100		2/2	3.0	CLAY: Tan to red, very stiff.			12,25,35,37	
105		1/2	N/A	SAND: Brown, fine grained, trace clay, saturated.		ML	REF	
110								

TITLE: NAS Whiting Field				LOG of WELL: WHF-2894-3		BORING NO. AST-SB-7	
CLIENT: SOUTHNAVFACENGCOM						PROJECT NO: 7518-40	
CONTRACTOR: Groundwater Protection				DATE STARTED: 4/09/92		COMPLTD: 4/09/92	
METHOD: HSA		CASE SIZE: 4" ID		SCREEN INT.: 70-80'		PROTECTION LEVEL: 0	
TOC ELEV.: FT.		MONITOR INST.: OVA		TOT DPTH: 86FT.		DPTH TO ∇ 73 FT.	
LOGGED BY: N. Pagano		WELL DEVELOPMENT DATE:				SITE: 2894	

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
5		1.7/2	0.0	CLAY: Brown to light brown to white, fine to medium grained, stiff.		CL	POSTHOLE	
10		1.9/2	0.0	SANDY CLAY: Red-brown to light brown, fine to medium grained.				
15		1.8/2	0.0	SAND: Light brown to brown, fine to medium grained, few gravels.		SM		
20		2/2	0.0	SAND: Light brown, white, fine to medium grained.				
25		N.R.	N.M.	NO RECOVERY				
30		1.9/2	N.M.	SAND: Light brown, pale brown, tan, fine to medium grained.				
35		1.1/2	0.0	SAND: Light brown to white, fine to medium grained.				
40		1.1/2	1.0	SAND: Light brown to white, fine to medium grained.				
45		1.5/2	0.0	SAND: Light brown, pale brown, white, fine to coarse grained, few gravels.		GM		
50		1.6/2	3.0			SM		
55								

TITLE: NAS Whiting Field		LOG of WELL: WHF-2894-3	BORING NO. AST-SB-7
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7518-40
CONTRACTOR: Groundwater Protection		DATE STARTED: 4/09/92	COMPLTD: 4/09/92
METHOD: HSA	CASE SIZE: 4" ID	SCREEN INT.: 70-80'	PROTECTION LEVEL: D
TOC ELEV.: FT.	MONITOR INST.: OVA	TOT DPTH: 88FT.	DPTH TO ∇ 73 FT.
LOGGED BY: N. Pagano	WELL DEVELOPMENT DATE:		SITE: 2894



TITLE: NAS Whiting Field		LOG of WELL: WHF-2894-4		BORING NO. AST-SB-2	
CLIENT: SOUTHNAVFACENGCOM				PROJECT NO: 7518-40	
CONTRACTOR: Groundwater Protection			DATE STARTED: 4/11/92		COMPLTD: 4/11/92
METHOD: HSA		CASE SIZE: 4" ID		SCREEN INT.: 75-90'	
TOC ELEV.: FT.		MONITOR INST.: OVA		PROTECTION LEVEL: D	
LOGGED BY: N. Pagano		TOT DPTH: 91 FT.		DEPTH TO ∇: 83 FT.	
WELL DEVELOPMENT DATE:			SITE: 2894		

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
5			2.0/2	0.0	CLAYEY SAND: Red-brown to brown to buff, fine to medium grained.		SC		
10			1.0/2	0.0					
15			0.8/2	0.0	CLAYEY SAND: Red-brown to brown to buff, fine to medium grained.				
20			1.3/2	0.0	SANDY CLAY: Pink to white to yellow, fine to medium grained, very stiff.				
25			1.6/2	0.0					
30			1.8/2	0.0	SAND: Pink to red-brown to buff, fine to medium grained, trace clay.		SM		
35			1.8/2	0.0	SAND: Pink to red-brown to buff, fine to medium grained, trace clay.				
40			2.0/2	0.0	SAND: Tan to buff to white, fine to coarse grained, trace clay, few gravels.		GM		
45			1.2/2	0.0	SAND: White to buff to tan, fine to medium grained.		SM		
50			1.2/2	0.0	SAND: White to buff to tan, fine to medium grained.				
55							GM		

TITLE: NAS Whiting Field		LOG of WELL: WHF-2894-4	BORING NO. AST-SB-2
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7518-40	
CONTRACTOR: Groundwater Protection		DATE STARTED: 4/11/92	COMPLTD: 4/11/92
METHOD: HSA	CASE SIZE: 4" ID	SCREEN INT.: 75-90'	PROTECTION LEVEL: D
TOC ELEV.: FT.	MONITOR INST.: OVA	TOT DPTH: 91 FT.	DPTH TO ∇ 83 FT.
LOGGED BY: N. Pagano	WELL DEVELOPMENT DATE:		SITE: 2894

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
Continued from PAGE 1								
80		1.2/2	0.0	SAND: Pink to reddish-brown to tan, fine to coarse grained, little gravels.		GM		
		1.0/2	0.0					
85		1.0/2	0.0	SAND: Pink to tan, fine to coarse grained, little gravels.				
70		1.0/2	0.0	SAND: Buff to tan to white, fine to coarse grained with moderate gravel.				
75		1.3/2	0.0	SAND: Pink to red-brown to buff, fine to coarse grained with some gravel.				
80		1.7/2	0.0	SAND: Pink to red-brown, fine to coarse grained with moderate gravel, moist throughout.				
85		1.8/2	0.0			CH		
90		2.0/2	0.0	SAND: Pink to red-brown, fine to coarse grained with moderate gravel, saturated.				
95		2.0/2	0.0	CLAY: Red to gray to white to brown, fine to medium grained, stiff.				
100		2.0/2	G.C.					
105		2.0/2	G.C.	SAND: Yellow to white to buff to brown, fine to coarse grained, saturated.		GM		
110								

APPENDIX B
LITHOLOGIC LOGS

TITLE: NAS Whiting Field					LOG of WELL:			BORING NO. AST-SB-13		
CLIENT: SOUTHNAVFACENGCOM								PROJECT NO: 7518-42		
CONTRACTOR: IVEY Drilling Company					DATE STARTED: 03/11/94			COMPLTD: 03/11/94		
METHOD: 3.25" HSA & 2" Mud Rotary			CASE SIZE: n/a		SCREEN INT.: n/a			PROTECTION LEVEL: D		
TOC ELEV.: n/a FT.			MONITOR INST.: OVA		TOT DPTH: 82FT.			DPTH TO ▽ ~81 FT.		
LOGGED BY: P. Wagner			WELL DEVELOPMENT DATE: n/a					SITE: 2891		
DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS		LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
						CLAYEY SAND: clay and silt to fine-grained sand, ~20% clay, well graded, loose, grayish brown.		SC		POSTHOLE
5			2.0/2	0		CLAYEY SAND: clay and silt to fine-grained sand, ~10% clay, well graded, soft, moderate brown.			3,4,6,7	
			2.0/2	1		CLAYEY SAND: as above, ~15% clay, light brown to moderate brown.			6,3,4,6	
10			2.0/2	0		CLAYEY SAND: clay to medium grained sand, ~20% clay, ~5% medium sand, soft, damp, dark yellowish orange.			6,5,4,4	
			1.9/2	0		CLAYEY SAND: as above.			5,6,9,9	
			1.6/2	0		SANDY CLAY: nonplastic, ~25% sand, fine to coarse subangular grains, moderate reddish brown.			3,4,6,9	
15			1.6/2	0		CLAYEY SAND: clay to fine-grained sand, ~10% clay, soft moderate brown.		CL	2,4,8,9	
			1.7/2	0		SANDY CLAY: nonplastic, ~40% fine-grained sand, soft, light brownish gray.			2,6,9,15	
			1.9/2	0		SANDY CLAY: stiff, ~15% fine-grained sand, medium light gray with moderate reddish brown mottling.				
20						SANDY CLAY: as above, very stiff, medium light gray with light red mottling.		SC	4,5,5,8	
						CLAYEY SAND: clay to fine-grained sand, ~20% clay, soft, dark yellowish orange.		SP		
						SAND: fine-grained, well sorted, soft, moderate pink and very light gray.				
25			2.0/2	0		CLAYEY SAND: clay to fine-grained sand, ~15% clay, soft, light brown.		SC	6,7,8,9	
						SAND: fine- to very coarse-grained, ~5% coarse, soft, very light gray.		SW		
30								GM		

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ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NAS Whiting Field		LOG of WELL:	BORING NO. AST-SB-13
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7518-42
CONTRACTOR: IVEY Drilling Company		DATE STARTED: 03/11/94	COMPLTD: 03/11/94
METHOD: 3.25" HSA & 2" Mud Rotary	CASE SIZE: n/a	SCREEN INT.: n/a	PROTECTION LEVEL: D
TOC ELEV.: n/a FT.	MONITOR INST.: OVA	TOT DPTH: 82FT.	DPTH TO ∇ ~81 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: n/a		SITE: 2891

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
Continued from PAGE 1									
			2.0/2	0	SAND: very fine- to coarse-grained with very few small subrounded quartzite pebbles (1%), soft, light gray.		GM	5,6,9,9	
35			1.7/2	0	SAND: as above, light gray with moderate pink laminae.			6,10,10,14	
40			2.0/2	0	SAND: as above, 0"-6"= mottled pink and light gray. 6"-24"= light gray.			6,6,8,7	
45			2.0/2	2	SAND: very fine- to fine-grained, graded, soft, light gray, moderate pink and dark yellowish orange layers.		SW	6,8,10,12	
50			1.8/2	0	SAND: very fine- to medium-grained, poorly sorted, subrounded, soft, light gray with some 1" to 2" moderate pink layers.			6,12,11,14	
55			2.0/2	1	SAND: very fine- to fine-grained, soft, moderate pink ending. Bottom 1/8" is gray sandy clay. SAND: very fine- to fine-grained, soft, light gray.		SC	6,10,12,14	
60									

TITLE: NAS Whiting Field		LOG of WELL:	BORING NO. AST-SB-13
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7518-42
CONTRACTOR: IVEY Drilling Company		DATE STARTED: 03/11/94	COMPLTD: 03/11/94
METHOD: 3.25" HSA & 2" Mud Rotary	CASE SIZE: n/a	SCREEN INT.: n/a	PROTECTION LEVEL: D
TOC ELEV.: n/a FT.	MONITOR INST.: OVA	TOT DPTH: 82FT.	DPTH TO ∇ ~81 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: n/a		SITE: 2891

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
Continued from PAGE 2									
			1.7/2	0	SAND: as above.		SC	10,11,13,14	
65			1.6/2	2	SAND: very fine- to medium-grained with several 1/2 inch clay layers, firm, well graded, light gray with brown red laminae.			10,12,13,22	
70			1.0/2	2	SAND: very fine- to fine-grained with some clay, well graded, firm, light gray.			9,9,14,24	
75			1.0/2	0	SAND: fine- to coarse-grained, well graded, firm, light red.		SW	19,27,32,25	
80			1.0/2	0	SAND: very fine- to very coarse-grained with several 1/8" clay stringers, well graded, firm, dark yellowish orange to grayish orange.		GC	15,17,20,22	
85									
90									

TITLE: NAS Whiting Field		LOG of WELL:		BORING NO. AST-SB-14	
CLIENT: SOUTHNAVFACENGCOM				PROJECT NO: 7518-42	
CONTRACTOR: IVEY Drilling Company			DATE STARTED: 03/12/94		COMPLTD: 03/12/94
METHOD: 3.25" HSA & 2" Mud Rotary		CASE SIZE: n/a		SCREEN INT.: n/a	PROTECTION LEVEL: D
TOC ELEV.: n/a FT.		MONITOR INST.: OVA		TOT DPTH: 77FT.	DPTH TO ∇ ~76 FT.
LOGGED BY: P. Wagner		WELL DEVELOPMENT DATE: n/a			SITE: 2891

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
5			1.7/2	0	CLAYEY SAND: clay and silt to fine-grained sand, ~20% clay, well graded, soft, dark reddish brown.		SC	POSTHOLE	
			1.9/2	1	CLAYEY SAND: clay to fine-grained sand, ~35% clay, well graded, soft, dark reddish brown.			3,3,2,2	
			1.6/2	0	CLAYEY SAND: as above, moderate reddish brown with a 1" light gray sandy clay layer at bottom of spoon.		CL	2,3,4,7	
10			1.7/2	0	SANDY CLAY: nonplastic, 30 to 35% fine- to coarse-grained sand, dark yellowish orange with moderate reddish brown mottles.		SC	2,6,7,8	
			1.8/2	0	CLAYEY SAND: very fine- to fine-grained, 20 to 25% clay, soft, moderate brown.		CL	4,8,19,18	
15			1.6/2	0	SANDY CLAY: nonplastic, stiff, 25 to 30% fine- to very coarse-sand, well graded, mottled dark yellowish orange, grayish orange, and light red.			2,4,8,14	
			2.0/2	0	SANDY CLAY: as above.		SC	4,7,8,8	
			1.7/2	0	CLAYEY SAND: fine-grained to small pebbles, well graded, soft, moderate reddish orange.			4,6,7,7	
20				0	CLAYEY SAND: fine- to very coarse-grained, ~1% pebbles, 15% clay decreasing with depth, soft, moderate orange pink.			4,4,7,8	
					SAND: as above, with 2 to 5% clay.				
25			2.0/2	0	SAND: as above.			5,7,10,11	
					SAND: very fine- to fine-grained, graded, soft, grayish orange pink.		SP		
30							SC		

TITLE: NAS Whiting Field		LOG of WELL:	BORING NO. AST-SB-14
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7518-42
CONTRACTOR: IVEY Drilling Company		DATE STARTED: 03/12/94	COMPLTD: 03/12/94
METHOD: 3.25" HSA & 2" Mud Rotary	CASE SIZE: n/a	SCREEN INT.: n/a	PROTECTION LEVEL: D
TOC ELEV.: n/a FT.	MONITOR INST.: OVA	TOT DPTH: 77FT.	DPTH TO ∇ ~76 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: n/a		SITE: 2891

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
Continued from PAGE 1									
			2.0/2	0	CLAYEY SAND: very fine- to fine-grained, ~10% clay, soft, grayish orange pink above dark yellowish brown.		SC	5,6,10,10	
							GC		
					CLAYEY SAND: very fine- to coarse-grained, 2 to 5% coarse grains, well graded, 15% clay, reddish orange and pinkish gray layers grading down to entirely pinkish gray.		SC	8,8,8,8	
35			2.0/2	0	SAND: clay to fine-grained sand, 5% clay, soft, moderate orange pink grading down to very light gray.		CL		
							SC	4,7,8,6	
40			1.8/2	0	SANDY CLAY: slightly plastic, 25% very fine- to fine-grained sand, moderate pink.		SC		
					SAND: very fine- to fine-grained, 2 to 5% clay and silt, soft, moderate reddish orange.		SC	8,10,10,4	
45			1.8/2	2	SAND: as above, moderate reddish orange grading down to very light gray.		SC		
							SW	13,8,12,13	
50			1.7/2	0	SAND: fine- to medium-grained with trace of very coarse grains, well graded, firm, very light gray.		SC		
							SW	6,8,10,12	
55			1.7/2	1	SAND: very fine- to fine-grained, graded, soft, trace clay, very light gray.		SW		
					SAND: fine- to medium-grained with trace of very coarse grains to small pebbles, well graded, firm, reddish orange.		SW		
60							SW		

TITLE: NAS Whiting Field		LOG of WELL:	BORING NO. AST-SB-14
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7518-42
CONTRACTOR: IVEY Drilling Company		DATE STARTED: 03/12/94	COMPLTD: 03/12/94
METHOD: 3.25" HSA & 2" Mud Rotary	CASE SIZE: n/a	SCREEN INT.: n/a	PROTECTION LEVEL: D
TOC ELEV.: n/a FT.	MONITOR INST.: OVA	TOT DPTH: 77FT.	DPTH TO ∇ ~76 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: n/a		SITE: 2891

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
Continued from PAGE 2									
			1.5/2	0	SAND: as above.		SW		
					SAND: very fine- to fine-grained, poorly graded, firm, white.		SP	10,15,21,26	
65			1.7/2	2	SAND: as above, trace clay, white above light red overlying dark yellowish orange.			2,18,24,20	
70			2.0/2	2	SAND: fine-grained, poorly graded, firm, subangular grains, very pale orange.				
					SAND: very fine- to medium-grained, trace clay and silt, 1/4" clay stringers, firm, moderate orange pink to moderate red.		SC	17,23,27,28	
75			2.0/2	0	CLAYEY SAND: very fine- to fine-grained, 30 to 35% clay, firm, very pale orange to pale yellowish orange.		SP	13,27,40,52	
					SAND: medium-grained, a trace of fine-grained, poorly graded, dense, grayish orange.				
80									
85									
90									

APPENDIX C
LABORATORY ANALYTICAL DATA



ENSECO-WADSWORTH/ALERT Laboratories

Division of Corning Lab Services, Inc.

5910 Breckenridge Parkway, Suite H 813-621-0784
Tampa, FL 33610 FAX 813-623-6021

ANALYTICAL REPORT

PROJECT NO. 07518.42

NAS WHITING SITE 2891

PAMELA WAGNER

ABB ENVIRONMENTAL SERVICES

ENSECO-WADSWORTH/ALERT LABORATORIES
Certification Numbers: E84059, HRS84297
FDEP CompQAP: 870270G

Chris Amstutz
Project Manager

March 25, 1994



ENSECO-WADSWORTH/ALERT

Laboratories

ANALYTICAL METHODS SUMMARY

Enseco-Wadsworth/ALERT Laboratories utilizes only USEPA approved methods in analytical work. The methods used for the analyses presented in the following report are listed below.

Parameters

Ethylene Dibromide
by Purge and Trap/ECD
Polyaromatic Hydrocarbons
Volatile Organics
Lead
Petroleum Hydrocarbons
Total Recoverable

Methods

FL-HRS 601-MODIFIED

USEPA 625
USEPA 601/2
MCAWW 239.2
MCAWW 418.1

References:

- FL-HRS Method Developed by the State of Florida Department of Health and Rehabilitative Services Analytical Laboratories.
- MCAWW Methods for Chemical Analysis of Water and Wastes, EMSL: Cincinnati, OH: March 1983 and its updates.
- USEPA Longbottom, J. and Lichtenberg, J., Methods for Organic Chemical Analysis of Municipal and Industrial Waste Water
EMSL: Cincinnati, OH, July 1982 and its updates.



ENSECO-WADSWORTH/ALERT

Laboratory

EXECUTIVE SUMMARY - Detection Highlights

B4C130004

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>
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NO DETECTABLE PARAMETERS CONTAINED IN THIS REPORT



ENSECO-WADSWORTH/ALERT
Laboratories

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>
K9026	B4C110004-001	WHF-1467-13R
K9027	B4C110004-002	WHF-2894-2
K9028	B4C110004-003	WHF-2894-3
K9029	B4C110004-004	WHF-2894-4
K9030	B4C110004-005	WHF-2894-5
K9031	B4C110004-006	WHF-2894-DUP
K9032	B4C110004-007	TRIP BLANK



ENSECO-WADSWORTH/ALERT
Laboratories

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>
K9724	B4C130004-001	WHF 2894-1
K9725	B4C130004-002	WHF 2894-1D
K9726	B4C130004-003	WHF 2894-2D
K9727	B4C130004-004	WHF 2894-6
K9728	B4C130004-005	WHF 2891-EB
K9729	B4C130004-006	TRIP BLANK



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1

WO #: K9724105
LAB #: B4C130004-001
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

----- GC Volatiles -----					
1 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromodichloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromoform	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromomethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Chlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dibromochloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroform	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
Ethylbenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	105	(78 - 122)			
Trifluorotoluene	100	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1

WO #: K9724105
LAB #: B4C130004-001
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -
2 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Methylene chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Tetrachloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Toluene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Trichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Vinyl chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Xylenes, Total	ND	1.0	USEPA 601/2	03/17/94	4077074
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	105	(78 - 122)
Trifluorotoluene	100	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1

WO #: K9724104

LAB #: B4C130004-001

MATRIX: WATER

DATE SAMPLED: 3/10/94

DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/23/94	4083038

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

Bromoform

91

(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1

WO #: K9724103
LAB #: B4C130004-001
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Acenaphthylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(b)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(k)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(ghi)perylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Chrysene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Dibenz(a,h)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluorene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Indeno(1,2,3-cd)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
2-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Naphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Phenanthrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
1-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	84	(22 - 135)
2-Fluorobiphenyl	61	(34 - 140)
Terphenyl-d14	46	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1

WO #: K9724
LAB #: B4C130004-001
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/22/94	4082091

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1

WO #: K9724
LAB #: B4C130004-001
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-2

WO #: K9027105
LAB #: B4C110004-002
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
PARAMETER	1 OF 2		METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
	RESULT (ug/L)	REPORTING LIMIT			
Benzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromodichloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromoform	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromomethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Chlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dibromochloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroform	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
Ethylbenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	90	(78 - 122)			
Trifluorotoluene	98	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-2

WO #: K9027105
LAB #: B4C110004-002
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -

2 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Methylene chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Tetrachloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Toluene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Trichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Vinyl chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Xylenes, Total	ND	1.0	USEPA 601/2	03/19/94	4080110
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	90	(78 - 122)
Trifluorotoluene	98	(73 - 131)

NOTE: AS RECEIVED
ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-2

WO #: K9027104
LAB #: B4C110004-002
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/21/94	4080116

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromoform	90	(41 - 152)

NOTE: AS RECEIVED
ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-2

WO #: K9027103
LAB #: B4C110004-002
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Acenaphthylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (a) anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (b) fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (k) fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (ghi) perylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (a) pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Chrysene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Dibenz (a,h) anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluorene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Indeno (1,2,3-cd) pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
2-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Naphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Phenanthrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
1-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	66	(22 - 135)
2-Fluorobiphenyl	94	(34 - 140)
Terphenyl-d14	78	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-2

WO #: K9027
LAB #: B4C110004-002
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/17/94	4076074

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-2

WO #: K9027
LAB #: B4C110004-002
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-3

WO #: K9028105

LAB #: B4C110004-003

MATRIX: WATER

DATE SAMPLED: 3/09/94

DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
1 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromodichloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromoform	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromomethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Chlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dibromochloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroform	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
Ethylbenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	93	(78 - 122)			
Trifluorotoluene	97	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-3

WO #: K9028105
LAB #: B4C110004-003
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

----- GC Volatiles -----

2 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Methylene chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Tetrachloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Toluene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Trichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Vinyl chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Xylenes, Total	ND	1.0	USEPA 601/2	03/19/94	4080110
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	93	(78 - 122)
Trifluorotoluene	97	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-3

WO #: K9028104

LAB #: B4C110004-003

MATRIX: WATER

DATE SAMPLED: 3/09/94

DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/21/94	4080116

SURROGATE RECOVERY

1

ACCEPTABLE LIMITS

Bromoform

102

(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-3

WO #: K9028103
LAB #: B4C110004-003
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Acenaphthylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (a) anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (b) fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (k) fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (ghi) perylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (a) pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Chrysene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Dibenz (a, h) anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluorene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Indeno (1, 2, 3-cd) pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
2-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Naphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Phenanthrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
1-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	76	(22 - 135)
2-Fluorobiphenyl	101	(34 - 140)
Terphenyl-d14	90	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-3

WO #: K9028
LAB #: B4C110004-003
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/22/94	4082091

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-3

WO #: K9028
LAB #: B4C110004-003
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED
ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-4

WO #: K9029105
LAB #: B4C110004-004
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
1 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromodichloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromoform	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromomethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Chlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dibromochloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroform	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
Ethylbenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	94	(78 - 122)			
Trifluorotoluene	97	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-4

WO #: K9029105
LAB #: B4C110004-004
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
2 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Methylene chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Tetrachloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Toluene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Trichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Vinyl chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Xylenes, Total	ND	1.0	USEPA 601/2	03/19/94	4080110
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	94	(78 - 122)
Trifluorotoluene	97	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-4

WO #: K9029104

LAB #: B4C110004-004

MATRIX: WATER

DATE SAMPLED: 3/09/94

DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/21/94	4080116

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

Bromoform

96

(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-4

WO #: K9029103
LAB #: B4C110004-004
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

----- GC/MS Semi-Volatiles -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Acenaphthylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(a)anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(b)fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(k)fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(ghi)perylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(a)pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Chrysene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Dibenz(a,h)anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluorene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Indeno(1,2,3-cd)pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
2-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Naphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Phenanthrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
1-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	81	(22 - 135)
2-Fluorobiphenyl	100	(34 - 140)
Terphenyl-d14	68	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-4

WO #: K9029
LAB #: B4C110004-004
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/22/94	4082091

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-4

WO #: K9029
LAB #: B4C110004-004
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



**ENSECO-WADSWORTH/ALERT
Laboratories**

ABB ENVIRONMENTAL SERVICES

WHF-2894-5

WO #: K9030105
LAB #: B4C110004-005
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
1 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Benzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromodichloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromoform	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromomethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Chlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dibromochloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroform	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
Ethylbenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	89	(78 - 122)			
Trifluorotoluene	98	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-5

WO #: K9030105
LAB #: B4C110004-005
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
2 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Methylene chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Tetrachloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Toluene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Trichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Vinyl chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Xylenes, Total	ND	1.0	USEPA 601/2	03/19/94	4080110
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	89	(78 - 122)
Trifluorotoluene	98	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-5

WO #: K9030104
LAB #: B4C110004-005
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/21/94	4080116

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromoform	95	(41 - 152)

NOTE: AS RECEIVED
ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-5

WO #: K9030103
LAB #: B4C110004-005
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Acenaphthylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (a) anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (b) fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (k) fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (ghi) perylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo (a) pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Chrysene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Dibenz (a, h) anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluorene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Indeno (1,2,3-cd) pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
2-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Naphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Phenanthrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
1-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	83	(22 - 135)
2-Fluorobiphenyl	105	(34 - 140)
Terphenyl-d14	76	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-5

WO #: K9030
LAB #: B4C110004-005
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/15/94	4074062

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-5

WO #: K9030
LAB #: B4C110004-005
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



**ENSECO-WADSWORTH/ALERT
Laboratories**

ABB ENVIRONMENTAL SERVICES

WHF 2894-6

WO #: K9727105
LAB #: B4C130004-004
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -					
PARAMETER	1 OF 2		METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
	RESULT (ug/L)	REPORTING LIMIT			
Benzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromodichloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromoform	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromomethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Chlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dibromochloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroform	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
Ethylbenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	118	(78 - 122)			
Trifluorotoluene	97	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-6

WO #: K9727105
LAB #: B4C130004-004
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

----- GC Volatiles -----					
2 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Methylene chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Tetrachloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Toluene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Trichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Vinyl chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Xylenes, Total	ND	1.0	USEPA 601/2	03/17/94	4077074
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	118	(78 - 122)
Trifluorotoluene	97	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-6

WO #: K9727104
LAB #: B4C130004-004
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/23/94	4083038

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromoform	117	(41 - 152)

NOTE: AS RECEIVED
ND NOT DETECTED AT THE STATED REPORTING LIMIT



**ENSECO-WADSWORTH/ALERT
Laboratories**

ABB ENVIRONMENTAL SERVICES

WHF 2894-6

WO #: K9727103
LAB #: B4C130004-004
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Acenaphthylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo (a) anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo (b) fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo (k) fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo (ghi) perylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo (a) pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Chrysene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Dibenz (a, h) anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluorene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Indeno (1, 2, 3-cd) pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
2-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Naphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Phenanthrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
1-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	95	(22 - 135)
2-Fluorobiphenyl	68	(34 - 140)
Terphenyl-d14	57	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-6

WO #: K9727
LAB #: B4C130004-004
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/22/94	4082091

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-6

WO #: K9727

LAB #: B4C130004-004

MATRIX: WATER

DATE SAMPLED: 3/10/94

DATE RECEIVED: 3/12/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-1467-13R

WO #: K9026105
LAB #: B4C110004-001
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

----- GC Volatiles -----					
PARAMETER	1 OF 2		METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
	RESULT (ug/L)	REPORTING LIMIT			
Benzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromodichloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromoform	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromomethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Chlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dibromochloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroform	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
Ethylbenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	88	(78 - 122)			
Trifluorotoluene	98	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-1467-13R

WO #: K9026105
LAB #: B4C110004-001
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

----- GC Volatiles -----					
2 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Methylene chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Tetrachloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Toluene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Trichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Vinyl chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Xylenes, Total	ND	1.0	USEPA 601/2	03/19/94	4080110
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	88	(78 - 122)
Trifluorotoluene	98	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-1467-13R

WO #: K9026104
LAB #: B4C110004-001
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/21/94	4080116

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromoform	96	(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



**ENSECO-WADSWORTH/ALERT
Laboratories**

ABB ENVIRONMENTAL SERVICES

WHF-1467-13R

**WO #: K9026103
LAB #: B4C110004-001
MATRIX: WATER**

**DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94**

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Acenaphthylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(a)anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(b)fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(k)fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(ghi)perylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(a)pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Chrysene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Dibenz(a,h)anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluorene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Indeno(1,2,3-cd)pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
2-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Naphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Phenanthrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
1-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	75	(22 - 135)
2-Fluorobiphenyl	81	(34 - 140)
Terphenyl-d14	47	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-1467-13R

WO #: K9026
LAB #: B4C110004-001
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/17/94	4076074

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-1467-13R

WO #: K9026
LAB #: B4C110004-001
MATRIX: WATER

DATE SAMPLED: 3/08/94
DATE RECEIVED: 3/11/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/21/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1D

WO #: K9725105
LAB #: B4C130004-002
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

----- GC Volatiles -----					
1 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromodichloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromoform	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromomethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Chlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dibromochloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroform	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
Ethylbenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	112	(78 - 122)			
Trifluorotoluene	98	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1D

WO #: K9725105
LAB #: B4C130004-002
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -

2 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Methylene chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Tetrachloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Toluene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Trichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Vinyl chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Xylenes, Total	ND	1.0	USEPA 601/2	03/17/94	4077074
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	112	(78 - 122)
Trifluorotoluene	98	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1D

WO #: K9725104
LAB #: B4C130004-002
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/23/94	4083038

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromoform	99	(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1D

WO #: K9725103
LAB #: B4C130004-002
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Acenaphthylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(b)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(k)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(ghi)perylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Chrysene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Dibenz(a,h)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluorene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Indeno(1,2,3-cd)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
2-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Naphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Phenanthrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
1-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	95	(22 - 135)
2-Fluorobiphenyl	70	(34 - 140)
Terphenyl-d14	63	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1D

WO #: K9725
LAB #: B4C130004-002
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/22/94	4082091

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-1D

WO #: K9725
LAB #: B4C130004-002
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-2D

WO #: K9726105
LAB #: B4C130004-003
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -					
1 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Benzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromodichloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromoform	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromomethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Chlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dibromochloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroform	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
Ethylbenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	99	(78 - 122)			
Trifluorotoluene	98	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-2D

WO #: K9726105
LAB #: B4C130004-003
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -					
2 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Methylene chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Tetrachloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Toluene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Trichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Vinyl chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Xylenes, Total	ND	1.0	USEPA 601/2	03/17/94	4077074
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	99	(78 - 122)
Trifluorotoluene	98	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-2D

WO #: K9726104

LAB #: B4C130004-003

MATRIX: WATER

DATE SAMPLED: 3/11/94

DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/23/94	4083038

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromoform	98	(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



**ENSECO-WADSWORTH/ALERT
Laboratories**

ABB ENVIRONMENTAL SERVICES

WHF 2894-2D

WO #: K9726103
LAB #: B4C130004-003
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Acenaphthylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(b)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(k)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(ghi)perylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Chrysene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Dibenz(a,h)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluorene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Indeno(1,2,3-cd)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
2-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Naphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Phenanthrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
1-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	89	(22 - 135)
2-Fluorobiphenyl	68	(34 - 140)
Terphenyl-d14	60	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-2D

WO #: K9726
LAB #: B4C130004-003
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/22/94	4082091

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2894-2D

WO #: K9726
LAB #: B4C130004-003
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-DUP

WO #: K9031105
LAB #: B4C110004-006
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

----- GC Volatiles -----					
1 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromodichloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromoform	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromomethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Chlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dibromochloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroform	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
Ethylbenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	86	(78 - 122)			
Trifluorotoluene	97	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-DUP

WO #: K9031105
LAB #: B4C110004-006
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
2 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Methylene chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Tetrachloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Toluene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Trichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Vinyl chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Xylenes, Total	ND	1.0	USEPA 601/2	03/19/94	4080110
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	86	(78 - 122)
Trifluorotoluene	97	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-DUP

WO #: K9031104

LAB #: B4C110004-006

MATRIX: WATER

DATE SAMPLED: 3/09/94

DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/21/94	4080116

SURROGATE RECOVERY

1

ACCEPTABLE LIMITS

Bromoform

91

(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



**ENSECO-WADSWORTH/ALERT
Laboratories**

ABB ENVIRONMENTAL SERVICES

WHF-2894-DUP

**WO #: K9031103
LAB #: B4C110004-006
MATRIX: WATER**

**DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94**

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Acenaphthylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(a)anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(b)fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(k)fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(ghi)perylene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Benzo(a)pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Chrysene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Dibenz(a,h)anthracene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluoranthene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Fluorene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Indeno(1,2,3-cd)pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
2-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Naphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Phenanthrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
Pyrene	ND	5.0	USEPA 625	03/14-03/18/94	4073064
1-Methylnaphthalene	ND	5.0	USEPA 625	03/14-03/18/94	4073064

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	82	(22 - 135)
2-Fluorobiphenyl	87	(34 - 140)
Terphenyl-d14	88	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-DUP

WO #: K9031
LAB #: B4C110004-006
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	ug/L	MCAWW 418.1	3/15/94	4074062

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF-2894-DUP

WO #: K9031
LAB #: B4C110004-006
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED
ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2891-EB

WO #: K9728105
LAB #: B4C130004-005
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

----- GC Volatiles -----					
1 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromodichloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromoform	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromomethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Chlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dibromochloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroform	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
Ethylbenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	110	(78 - 122)			
Trifluorotoluene	97	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2891-EB

WO #: K9728105
LAB #: B4C130004-005
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

----- GC Volatiles -----					
2 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Methylene chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Tetrachloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Toluene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Trichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Vinyl chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Xylenes, Total	ND	1.0	USEPA 601/2	03/17/94	4077074
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	110	(78 - 122)
Trifluorotoluene	97	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2891-EB

WO #: K9728104
LAB #: B4C130004-005
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	FL-HRS 601-M	03/23/94	4083038

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromoform	107	(41 - 152)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2891-EB

WO #: K9728103
LAB #: B4C130004-005
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Acenaphthylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(b)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(k)fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(ghi)perylene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Benzo(a)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Chrysene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Dibenz(a,h)anthracene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluoranthene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Fluorene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Indeno(1,2,3-cd)pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
2-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Naphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Phenanthrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
Pyrene	ND	5.0	USEPA 625	03/17-03/22/94	4076052
1-Methylnaphthalene	ND	5.0	USEPA 625	03/17-03/22/94	4076052

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	88	(22 - 135)
2-Fluorobiphenyl	66	(34 - 140)
Terphenyl-d14	61	(10 - 132)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2891-EB

WO #: K9728
LAB #: B4C130004-005
MATRIX: WATER

DATE SAMPLED: 3/10/94
DATE RECEIVED: 3/12/94

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Petroleum Hydrocarbons Total Recoverable	ND	1.0	mg/L	MCAWW 418.1	3/22/94	4082091

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

WHF 2891-EB

WO #: K9728

LAB #: B4C130004-005

MATRIX: WATER

DATE SAMPLED: 3/10/94

DATE RECEIVED: 3/12/94

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Lead	ND	5.0	ug/L	MCAWW 239.2	3/18- 3/22/94	4076073

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

TRIP BLANK

WO #: K9729101
LAB #: B4C130004-006
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -					
1 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Benzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromodichloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromoform	ND	1.0	USEPA 601/2	03/17/94	4077074
Bromomethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Chlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dibromochloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloroform	ND	1.0	USEPA 601/2	03/17/94	4077074
Chloromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/17/94	4077074
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/17/94	4077074
Ethylbenzene	ND	1.0	USEPA 601/2	03/17/94	4077074
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	114	(78 - 122)			
Trifluorotoluene	99	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

TRIP BLANK

WO #: K9729101
LAB #: B4C130004-006
MATRIX: WATER

DATE SAMPLED: 3/11/94
DATE RECEIVED: 3/12/94

- - - - - GC Volatiles - - - - -					
2 OF 2					
PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Methylene chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Tetrachloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Toluene	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/17/94	4077074
Trichloroethene	ND	1.0	USEPA 601/2	03/17/94	4077074
Vinyl chloride	ND	1.0	USEPA 601/2	03/17/94	4077074
Xylenes, Total	ND	1.0	USEPA 601/2	03/17/94	4077074
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/17/94	4077074

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	114	(78 - 122)
Trifluorotoluene	99	(73 - 131)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

TRIP BLANK

WO #: K9032101
LAB #: B4C110004-007
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

- - - - - GC Volatiles - - - - -					
1 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Benzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromodichloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromoform	ND	1.0	USEPA 601/2	03/19/94	4080110
Bromomethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Carbon tetrachloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Chlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dibromochloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
2-Chloroethyl vinyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloroform	ND	1.0	USEPA 601/2	03/19/94	4080110
Chloromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,3-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,4-Dichlorobenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
Dichlorodifluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,2-Dichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,2-Dichloropropane	ND	1.0	USEPA 601/2	03/19/94	4080110
cis-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
trans-1,3-Dichloropropene	ND	1.0	USEPA 601/2	03/19/94	4080110
Ethylbenzene	ND	1.0	USEPA 601/2	03/19/94	4080110
<u>SURROGATE RECOVERY</u>	<u>±</u>	<u>ACCEPTABLE LIMITS</u>			
Bromochloromethane	92	(78 - 122)			
Trifluorotoluene	98	(73 - 131)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

ABB ENVIRONMENTAL SERVICES

TRIP BLANK

WO #: K9032101
LAB #: B4C110004-007
MATRIX: WATER

DATE SAMPLED: 3/09/94
DATE RECEIVED: 3/11/94

----- GC Volatiles -----					
2 OF 2					
<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Trichlorofluoromethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Methylene chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2,2-Tetrachloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Tetrachloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Toluene	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,1-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
1,1,2-Trichloroethane	ND	1.0	USEPA 601/2	03/19/94	4080110
Trichloroethene	ND	1.0	USEPA 601/2	03/19/94	4080110
Vinyl chloride	ND	1.0	USEPA 601/2	03/19/94	4080110
Xylenes, Total	ND	1.0	USEPA 601/2	03/19/94	4080110
Methyl tert-butyl ether	ND	1.0	USEPA 601/2	03/19/94	4080110

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	92	(78 - 122)
Trifluorotoluene	98	(73 - 131)

NOTE: AS RECEIVED

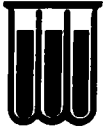
ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

QUALITY CONTROL SECTION

- **Quality Control Summary**
- **Laboratory Blanks**
- **Laboratory Control Sample**
- **Matrix Spike/Matrix Spike Duplicate Results**
- **Sample Custody Documentation**



ENSECO-WADSWORTH/ALERT

Laboratories

**QUALITY ASSURANCE / QUALITY CONTROL
PROGRAM SUMMARY**

Wadsworth/ALERT Laboratories considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with various analytical result reports. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow.

Surrogate Spike Recovery Evaluations

Known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added, as appropriate, to routine GC and GC/MS sample fractions prior to extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is an indication of the overall method efficiency for the individual sample. This surrogate spike recovery data is displayed alongside acceptable analytical method performance limits at the bottom of each applicable analytical result report sheet.

NOTE: Acceptable method performance for Base/Neutral Acid extractables is indicated by two (2) of three (3) surrogates for each fraction with a minimum recovery of ten (10) percent each. For Pesticides one (1) of two (2) surrogates meeting performance criteria is acceptable.

Laboratory Analytical Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interferences and background contamination levels associated with each analytical method. These method blanks include all aspects of actual laboratory method analysis (chemical reagents, glassware, etc.), substituting laboratory reagent water or solid for actual sample. The method blank must not contain any analytes above the reported detection limit. The following common laboratory contaminants are exceptions to this rule provided they are not present at greater than five times the detection limit.

Volatiles

Methylene chloride
Toluene
2-Butanone
Acetone

Semi-volatiles

Dimethyl phthalate
Diethyl phthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis (2-ethylhexyl) phthalate

Metals

Calcium
Magnesium
Sodium

A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method blanks.

Laboratory Analytical Method Check Sample Evaluations

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to a laboratory reagent blank prior to extraction and analysis. Percent recovery determinations demonstrate the performance of the analytical method. Failure of a check sample to meet established laboratory recovery criteria is cause to stop the analysis until the problem is resolved.



ENSECO-WADSWORTH/ALERT

Laboratories

QUALITY ASSURANCE / QUALITY CONTROL
PROGRAM SUMMARY
(cont'd)

At that time all associated samples must be re-analyzed. A minimum of five percent (5%) of all laboratory analyses are laboratory analytical method check samples.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recovery Evaluations

Known concentrations of designated matrix spikes (actual analytical method compounds) are added to two of three separate aliquots of a sequentially predetermined sample prior to extraction and analysis. Percent recovery determinations are calculated from both of the spiked samples by comparison to the actual values generated from the unspiked sample. These percent recovery determinations indicate the accuracy of the analysis at recovering actual analytical method compounds from the matrix. Relative percent difference determinations calculated from a comparison of the MS/MSD recoveries demonstrate the precision of the analytical method. Actual percent recovery and relative percent difference data is displayed alongside their respective acceptable analytical method performance limits in the QA/QC section of the report. The MS/MSD are considered in control when the precision is within established control limits and the associated check sample has been found to be acceptable. A minimum of ten percent (10%) of all analyses are MS/MSD quality control samples.

*****EXAMPLE*****

COMPOUND	SAMPLE CONC.	MS %REC	MSD %REC	RPD	RPD	QC LIMITS RECOVERY
4,4'-DDT	0	95	112	16	22	66-119
Benzene	10	86	93	8	20	39-150
(cmpd. name)	sample result	1st% recov.	2nd% recov.	Rel.% diff.		accep. method perform range

Analytical Result Qualifiers

The following qualifiers, as defined below, may be appended to analytical results in order to allow proper interpretation of the results presented:

J - indicates an estimated concentration (typically used when a dilution, matrix interference or instrumental limitation prevents accurate quantitation of a particular analyte).

B - indicates the presence of a particular analyte in the laboratory blank analyzed concurrently with the samples. Results must be interpreted accordingly.

DIL - indicates that because of matrix interferences and/or high analyte concentrations, it was necessary to dilute the sample to a point where the surrogate or spike concentrations fell below a quantifiable amount and could not be reported.



ENSECO-WADSWORTH/ALERT
Laboratories

INTRA-LAB BLANK REPORT

LAB #: B4C180000-074

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Benzene	ND	1.0	3/17/94	4077074
Bromodichloromethane	ND	1.0	3/17/94	4077074
Bromoform	ND	1.0	3/17/94	4077074
Bromomethane	ND	1.0	3/17/94	4077074
Carbon tetrachloride	ND	1.0	3/17/94	4077074
Chlorobenzene	ND	1.0	3/17/94	4077074
Dibromochloromethane	ND	1.0	3/17/94	4077074
Chloroethane	ND	1.0	3/17/94	4077074
2-Chloroethyl vinyl ether	ND	1.0	3/17/94	4077074
Chloroform	ND	1.0	3/17/94	4077074
Chloromethane	ND	1.0	3/17/94	4077074
1,2-Dichlorobenzene	ND	1.0	3/17/94	4077074
1,3-Dichlorobenzene	ND	1.0	3/17/94	4077074
1,4-Dichlorobenzene	ND	1.0	3/17/94	4077074
Dichlorodifluoromethane	ND	1.0	3/17/94	4077074
1,1-Dichloroethane	ND	1.0	3/17/94	4077074
1,2-Dichloroethane	ND	1.0	3/17/94	4077074
1,1-Dichloroethene	ND	1.0	3/17/94	4077074
cis-1,2-Dichloroethene	ND	1.0	3/17/94	4077074
trans-1,2-Dichloroethene	ND	1.0	3/17/94	4077074
1,2-Dichloropropane	ND	1.0	3/17/94	4077074
cis-1,3-Dichloropropene	ND	1.0	3/17/94	4077074
trans-1,3-Dichloropropene	ND	1.0	3/17/94	4077074
Ethylbenzene	ND	1.0	3/17/94	4077074
Trichlorofluoromethane	ND	1.0	3/17/94	4077074
<u>SURROGATE RECOVERY</u>	<u>$\frac{1}{2}$</u>	<u>ACCEPTABLE LIMITS</u>		
Bromochloromethane	100	(78 - 122)		
Trifluorotoluene	97	(73 - 131)		

NOTE:

ND (NONE DETECTED)



ENSECO-WADSWORTH/ALERT
Laboratories

INTRA-LAB BLANK REPORT

LAB #: B4C180000-074

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Methylene chloride	ND	1.0	3/17/94	4077074
1,1,2,2-Tetrachloroethane	ND	1.0	3/17/94	4077074
Tetrachloroethene	ND	1.0	3/17/94	4077074
Toluene	ND	1.0	3/17/94	4077074
1,1,1-Trichloroethane	ND	1.0	3/17/94	4077074
1,1,2-Trichloroethane	ND	1.0	3/17/94	4077074
Trichloroethene	ND	1.0	3/17/94	4077074
Vinyl chloride	ND	1.0	3/17/94	4077074
Xylenes, Total	ND	1.0	3/17/94	4077074
Methyl tert-butyl ether	ND	1.0	3/17/94	4077074

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Bromochloromethane	100	(78 - 122)
Trifluorotoluene	97	(73 - 131)

NOTE:

ND (NONE DETECTED)



ENSECO-WADSWORTH/ALERT
Laboratories

INTRA-LAB BLANK REPORT

LAB #: B4C240000-038

- - - - - GC Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Ethylene dibromide	ND	0.020	3/23/94	4083038

SURROGATE RECOVERY
Bromoform

83

ACCEPTABLE LIMITS
(41 - 152)

NOTE:

ND (NONE DETECTED)



ENSECO-WADSWORTH/ALERT
Laboratories

INTRA-LAB BLANK REPORT

LAB #: B4C170000-052

- - - - - GC/MS Semi-Volatiles - - - - -

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	5.0	3/17- 3/22/94	4076052
Acenaphthylene	ND	5.0	3/17- 3/22/94	4076052
Anthracene	ND	5.0	3/17- 3/22/94	4076052
Benzo (a) anthracene	ND	5.0	3/17- 3/22/94	4076052
Benzo (b) fluoranthene	ND	5.0	3/17- 3/22/94	4076052
Benzo (k) fluoranthene	ND	5.0	3/17- 3/22/94	4076052
Benzo (ghi) perylene	ND	5.0	3/17- 3/22/94	4076052
Benzo (a) pyrene	ND	5.0	3/17- 3/22/94	4076052
Chrysene	ND	5.0	3/17- 3/22/94	4076052
Dibenz (a, h) anthracene	ND	5.0	3/17- 3/22/94	4076052
Fluoranthene	ND	5.0	3/17- 3/22/94	4076052
Fluorene	ND	5.0	3/17- 3/22/94	4076052
Indeno (1, 2, 3-cd) pyrene	ND	5.0	3/17- 3/22/94	4076052
2-Methylnaphthalene	ND	5.0	3/17- 3/22/94	4076052
Naphthalene	ND	5.0	3/17- 3/22/94	4076052
Phenanthrene	ND	5.0	3/17- 3/22/94	4076052
Pyrene	ND	5.0	3/17- 3/22/94	4076052
1-Methylnaphthalene	ND	5.0	3/17- 3/22/94	4076052

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	80	(22 - 135)
2-Fluorobiphenyl	63	(34 - 140)
Terphenyl-d14	55	(10 - 132)

NOTE:

ND (NONE DETECTED)



ENSECO-WADSWORTH/ALERT
Laboratories

INTRA-LAB BLANK REPORT

LAB #: B4C130004

- - - - - METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>
Lead	ND	BATCH:4076073 5.0	ug/L	MCAWW 239.2	3/18- 3/21/94

NOTE:

ND NOT DETECTED AT THE STATED REPORTING LIMIT



ENSECO-WADSWORTH/ALERT
Laboratories

INTRA-LAB BLANK REPORT

LAB #: B4C230000-091

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Petroleum Hydrocarbons	ND	1.0	mg/L	3/22/94	4082091

NOTE:

ND (NONE DETECTED)



ENSECO-WADSWORTH/ALERT
Laboratories

CHECK SAMPLE REPORT

QC BATCH: 4077074
LAB #: B4C180000-074 C

PREPARATION DATE: 3/17/94
DATE ANALYZED: 3/17/94

- - - - - GC Volatiles - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Dichlorodifluoromethane	88	(58-156)
Chloromethane	110	(61-129)
Vinyl chloride	123	(65-146)
Bromomethane	128	(44-153)
Chloroethane	116	(64-163)
Trichlorofluoromethane	88	(69-129)
1,1-Dichloroethene	93	(61-144)
Methylene chloride	101	(82-122)
trans-1,2-Dichloroethene	101	(73-139)
1,1-Dichloroethane	100	(64-124)
cis-1,2-Dichloroethene	103	(65-113)
Chloroform	114	(65-138)
1,1,1-Trichloroethane	110	(81-125)
Carbon tetrachloride	113	(80-134)
1,2-Dichloroethane	110	(76-119)
Trichloroethene	99	(75-123)
1,2-Dichloropropane	111	(80-131)
Bromodichloromethane	102	(61-133)
2-Chloroethyl vinyl ether	0	(24-158)
cis-1,3-Dichloropropene	96	(66-117)
trans-1,3-Dichloropropene	104	(83-146)
1,1,2-Trichloroethane	102	(81-133)
Tetrachloroethene	112	(71-137)
Dibromochloromethane	95	(87-130)
Chlorobenzene	101	(58-133)
Bromoform	82	(58-138)
1,1,2,2-Tetrachloroethane	95	(70-126)
1,3-Dichlorobenzene	92	(81-115)
1,4-Dichlorobenzene	92	(84-115)
1,2-Dichlorobenzene	101	(85-119)



ENSECO-WADSWORTH/ALERT
Laboratories

CHECK SAMPLE REPORT

QC BATCH: 4077074
LAB #: B4C180000-074 C

PREPARATION DATE: 3/17/94
DATE ANALYZED: 3/17/94

- - - - - GC Volatiles - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Methyl tert-butyl ether	100	(70-133)
Benzene	109	(80-123)
Toluene	109	(80-119)
Chlorobenzene	90	(58-133)
Ethylbenzene	108	(89-120)
Xylenes, Total	101	(61-142)
1,3-Dichlorobenzene	85	(81-115)
1,4-Dichlorobenzene	78	(84-115)
1,2-Dichlorobenzene	72	(85-119)



ENSECO-WADSWORTH/ALERT
Laboratories

CHECK SAMPLE REPORT

QC BATCH: 4083038
LAB #: B4C240000-038 C

PREPARATION DATE: 3/23/94
DATE ANALYZED: 3/23/94

- - - - - GC Volatiles - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Ethylene dibromide	97	(62-129)



ENSECO-WADSWORTH/ALERT
Laboratories

CHECK SAMPLE REPORT

QC BATCH: 4076052
LAB #: B4C170000-052 C

PREPARATION DATE: 3/17/94
DATE ANALYZED: 3/22/94

- - - - - GC/MS Semi-Volatiles - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Phenol	0	(17-105)
Bis(2-chloroethyl) ether	0	(28-121)
2-Chlorophenol	0	(22-106)
1,3-Dichlorobenzene	0	(33-114)
1,4-Dichlorobenzene	0	(20-116)
Benzyl alcohol	0	(22-122)
1,2-Dichlorobenzene	0	(34-110)
2-Methylphenol	0	(37-88)
Bis(2-chloroisopropyl) ether	0	(10-146)
4-Methylphenol	0	(31-98)
N-Nitrosodi-n-propylamine	0	(16-147)
Hexachloroethane	0	(35-105)
Nitrobenzene	0	(27-127)
Isophorone	0	(13-134)
2-Nitrophenol	0	(19-113)
2,4-Dimethylphenol	0	(14-98)
Benzoic acid	0	(20-144)
Bis(2-chloroethoxy) methane	0	(35-115)
2,4-Dichlorophenol	0	(17-113)
1,2,4-Trichlorobenzene	0	(21-117)
Naphthalene	72	(22-151)
4-Chloroaniline	0	(14-181)
Hexachlorobutadiene	0	(43-101)
4-Chloro-3-methylphenol	0	(13-114)
1-Methylnaphthalene	71	(33-120)
2-Methylnaphthalene	70	(39-113)
Hexachlorocyclopentadiene	0	(10-110)
2,4,6-Trichlorophenol	0	(30-108)
2,4,5-Trichlorophenol	0	(36-90)
2-Chloronaphthalene	0	(38-106)
2-Nitroaniline	0	(22-108)
Dimethyl phthalate	0	(10-110)
Acenaphthylene	69	(17-145)
2,6-Dinitrotoluene	0	(24-128)
3-Nitroaniline	0	(26-99)
Acenaphthene	67	(30-150)



ENSECO-WADSWORTH/ALERT
Laboratories

CHECK SAMPLE REPORT

QC BATCH: 4076052
LAB #: B4C170000-052 C

PREPARATION DATE: 3/17/94
DATE ANALYZED: 3/22/94

- - - - - GC/MS Semi-Volatiles - - - - -

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
2,4-Dinitrophenol	0	(10-92)
4-Nitrophenol	0	(10-150)
Dibenzofuran	0	(34-104)
2,4-Dinitrotoluene	0	(33-113)
Diethyl phthalate	0	(10-110)
4-Chlorophenyl phenyl ether	0	(10-180)
Fluorene	66	(24-117)
4-Nitroaniline	0	(12-141)
4,6-Dinitro- 2-methylphenol	0	(10-142)
N-Nitrosodiphenylamine	0	(37-134)
4-Bromophenyl phenyl ether	0	(18-144)
Hexachlorobenzene	0	(10-180)
Pentachlorophenol	0	(10-121)
Phenanthrene	64	(26-126)
Anthracene	63	(20-117)
Di-n-butyl phthalate	0	(31-111)
Fluoranthene	62	(29-118)
Pyrene	58	(34-125)
Butyl benzyl phthalate	0	(25-121)
3,3'-Dichlorobenzidine	0	(10-146)
Benzo(a)anthracene	64	(31-115)
Chrysene	61	(18-140)
Bis(2-ethylhexyl)phthalate	0	(27-128)
Di-n-octyl phthalate	0	(17-160)
Benzo(b)fluoranthene	61	(12-119)
Benzo(k)fluoranthene	63	(23-134)
Benzo(a)pyrene	57	(40-115)
Indeno(1,2,3-cd)pyrene	65	(22-95)
Dibenzo(a,h)anthracene	54	(10-93)
Benzo(ghi)perylene	54	(10-103)



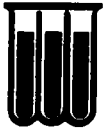
ENSECO-WADSWORTH/ALERT
Laboratories

CHECK SAMPLE REPORT

LAB #: B4C130004

----- METALS -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS	PREPARATION - ANALYSIS DATE
Lead	BATCH: 4076073 108	(70-126)	3/18- 3/21/94



ENSECO-WADSWORTH/ALERT
Laboratories

CHECK SAMPLE REPORT

LAB #: B4C130004

- - - - - INORGANIC ANALYTICAL REPORT - - - - -

<u>COMPOUND</u>	<u>SPIKE PERCENT RECOVERY</u>	<u>LIMITS</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>Q/C BATCH</u>
Petroleum Hydrocarbons Total Recoverable	96	(69-125)	3/22/94	4082091

ENSECO-WADSWORTH/ALERT LABORATORIES SAMPLE SHIPPER EVALUATION AND RECEIPT FORM

Client: ABB-ES Project Name/Number: NAS Whiting Site 28
 Samples Received By: [Signature] ENSECO Date Received: 3-12-94
 (Signature)
 Sample Evaluation Form By: [Signature] ENSECO LAB No: B4C130003⁰⁴ Wkw
 (Signature)

Type of shipping container samples received in? WAL Cooler ☒
 Client Cooler ☐ WAL Shipper ☐ Box ☐ Other ☐

Any "NO" responses or discrepancies should be explained in comments section.

- | | YES | NO |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|
| 1. Were custody seals on shipping container(s) intact? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Were custody papers properly included with samples? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Were custody papers properly filled out (ink, signed, match labels)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Did all bottles arrive in good condition (unbroken)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Were all bottle labels complete (Sample No., date, signed, analysis preservatives)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Were correct bottles used for the tests indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Were proper sample preservation techniques indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. Were samples received within adequate holding time? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9. Were all VOA bottles checked for the presence of air bubbles? (If air bubbles were found indicate in comment section) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Were samples in direct contact with wet ice? (NOTE TEMPERATURE BELOW) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 11. Were samples accepted into the laboratory? (If no see comments) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler # — Temp 4 °C Cooler # — Temp — °C
 Cooler # — Temp 5 °C Cooler # — Temp — °C

Comments: only one of two coolers was received with seals

**ENSECO-WADSWORTH/ALERT LABORATORIES
SAMPLE SHIPPER EVALUATION AND RECEIPT FORM**

Client: ABB Project Name/Number: Whiting Field

Samples Received By: Carol McHulty Date Received: 3/11/94
(Signature)

Sample Evaluation Form By: Carol McHulty LAB No: _____
(Signature)

Type of shipping container samples received in? WAL Cooler X

Client Cooler _____ WAL Shipper _____ Box _____ Other _____

Any "NO" responses or discrepancies should be explained in comments section.

- | | YES | NO |
|-----------------------------------------------------------------------------------------------------------------------------|----------|-------|
| 1. Were custody seals on shipping container(s) intact? | <u>X</u> | _____ |
| 2. Were custody papers properly included with samples? | <u>X</u> | _____ |
| 3. Were custody papers properly filled out (ink, signed, match labels)? | <u>X</u> | _____ |
| 4. Did all bottles arrive in good condition (unbroken)? | <u>X</u> | _____ |
| 5. Were all bottle labels complete
(Sample No., date, signed, analysis preservatives)? | <u>X</u> | _____ |
| 6. Were correct bottles used for the tests indicated? | <u>X</u> | _____ |
| 7. Were proper sample preservation techniques indicated? | <u>X</u> | _____ |
| 8. Were samples received within adequate holding time? | <u>X</u> | _____ |
| 9. Were all VOA bottles checked for the presence of air bubbles?
(If air bubbles were found indicate in comment section) | <u>X</u> | _____ |
| 10. Were samples in direct contact with wet ice?
(NOTE TEMPERATURE BELOW) | <u>X</u> | _____ |
| 11. Were samples accepted into the laboratory?
(If no see comments) | <u>X</u> | _____ |

Cooler # _____ Temp 6 °C Cooler # _____ Temp 5 °C
Cooler # _____ Temp 5 °C Cooler # _____ Temp _____ °C

Comments: _____



**WADSWORTH/ALERT
LABORATORIES**
Sampling, testing, mobile labs

5910 Breckenridge Pkwy.
Suite H
Tampa, FL 33610

Chain of Custody Record

(813) 621-0784
Fax (813) 623-6021

Record 1 of 1
2002

Client: ABB-ES		Project Name / Location: SITE 2891, NAS WHITING FIELD			No. Of CONTAINERS	Parameter										Remarks
Sampler(s): Joe Uilo, Pamela Wagner		Project #: 7518-42				VOC-6c1/6c2	PAH-610	METALS-2892	TRPH-418.1	EDB-504						
Item #	Date	Time	MATRIX	Sample Location												
1	3-8-94		H ₂ O	WHF-1467-13R	8	2	2	1	1	2						
2	3-8-94			WHF-146												<i>RAW</i>
3	3-8-94			WHF-2894-5	8	2	2	1	1	2						
4	3-9-94			WHF-2894-2	10	3	2	1	1	3						
5	3-9-94			WHF-2894-3	10	3	2	1	1	3						
6	3-9-94			WHF-2894-DUP	10	3	2	1	1	3						
7	3-9-94			ms	1				1							from 2894-2
8	3-9-94			msd	1				1							from 2894-2
9	—	—		TRIP BLANK	3	3										
10																
11																

Total Containers **51**

Number of Coolers in Shipment **2**

Bailers **N/A**

Report To:	Transfer Number	Item Number(s)	Relinquished By / Company	Accepted By / Company	Date	Time
PAMELA J. WAGNER						
Additional Comments:						
STANDARD TURNAROUND. 601/602 : TRPH preserved w/ HCL. LEAD preserved w/ HNO₃ :	1	1-9	<i>PR / H / ABB-ES</i>	FED-EX	3-9-94	17:00
	2			<i>initial incorrectly</i>	10/19/94	
	3					
	4					
	5					
	6					



WADSWORTH/ALERT
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Sampling, testing, mobile labs

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Tampa, FL 33610

Chain of Custody Record

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Fax (813) 623-6021

Record _____ of _____

2239

Client: <u>ADFS</u>		Project Name / Location: <u>NE 1st Ave Site 2811</u>			No. Of CONTAINERS	Parameter										Remarks			
Sampler(s): <u>TO 100-100-100-100</u>		Project #: <u>721-42</u>				VOC	PAH	METALS	TRPH	EDB									
Item #	Date	Time	MATRIX	Sample Location															
1				<u>100-100-100-100</u>	1	3	2	1	1	3									
2				<u>100-100-100-100</u>	1	3	2	1	1	3									
3				<u>100-100-100-100</u>	1	3	2	1	1	3									
4				<u>100-100-100-100</u>	1	3	2	1	1	3									
5				<u>100-100-100-100</u>	1	3	2	1	1	3									
6				<u>TRIP BLANK</u>	3	3													
7																			
8																			
9																			
10																			
11																			

Total Containers

53

Number of Coolers in Shipment

2

Bailers

0

Report To: <u>ADFS</u>	Transfer Number	Item Number(s)	Relinquished By / Company	Accepted By / Company	Date	Time
Additional Comments: <u>VOC</u> <u>PAH</u> <u>TRPH</u> <u>EDB</u> <u>100-100-100-100</u> <u>100-100-100-100</u> <u>100-100-100-100</u>	1	1	<u>TO 100-100-100-100</u>	<u>ADFS</u>	<u>1/1/11</u>	<u>11:45</u>
	2	1-6		<u>ADFS</u>	<u>3/12/11</u>	<u>11:45</u>
	3					
	4					
	5					
	6					



WADSWORTH/ALERT
LABORATORIES
Sampling, testing, mobile labs

5910 Breckenridge Pkwy.
Suite H
Tampa, FL 33610

Chain of Custody Record
(813) 621-0784
Fax (813) 623-6021

Record 1 of 1
2242

Client: ABB-ES		Project Name / Location: Site 254, NAS Whiting Field		No. Of CONTAINERS	Parameter										Remarks		
Sampler(s): J.ULLO, P. WAGNER		Project #: 7518-42			VOC-601/602	PAH-610	METALS-239.2	TRPH-412.1	EDB-504								
Item #	Date	Time	MATRIX	Sample Location													
1	3-9-94	1745	1/20	254 WHF-2294-4	8	2	2	1	1	2							601/602 → HCL 418.1 → HCL 239.2 → H ₂ O ₃
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	

Total Containers

8

Number of Coolers in Shipment

3

Bailers

N/A

Report To:

PAMELA WAGNER

Additional Comments:

STANDARD TURNAROUND TIME

Transfer Number

Item Number(s)

Relinquished By / Company

Accepted By / Company

Date

Time

1

1

PL / K / ABB

FED-EX

3-9-94

1720

2

3

4

5

6

incl. per July 94

7/1/94

1000